

## EasyVision RAD R4.X

### Imager Compatibility

#### FILING INSTRUCTIONS

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SUBSYSTEM Manual EasyVision RAD R4.X



# PHILIPS

**Philips Medical Systems  
Development and Manufacturing Centre**

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**SERVICE MANUAL  
744  
UNIT**

**EasyVision RAD R4.X**

**Imager Compatibility**

DMC Hamburg

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**SERVICE MANUAL - UNIT****EasyVision RAD R4.X  
Imager Compatibility**

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# 1. CONNECTIVITY EasyVision RAD R4.2

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## 1.1. INTRODUCTION

This documentation is the imager-specific information for the EasyVision. There is a separate section devoted to each printer manufacturer containing the following information:

- type of connection
- ordering information;
- configuration;
- functional description;
- service notes;
- tested releases and film sizes.

Not all commercial information is available at present. You are kindly requested to send any comment on this document to:

### Helpdesk Hamburg

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## **1.2. Compatibility**

The pictures below are screen captures from the EasyVision RAD R4.2V2 L1/2 and give an indication of the supported printers.

### **1.2.1. EasyVision RAD R4.2.L1**

#### **1.2.1.1. PCI**

Listed below are the names of the PCI interface (point to point) Laser Hardcopy Units supported by and compatible with EasyVision RAD R4.2 L1

**3M 8300 Landscape  
3M 8300 Portrait  
3M 8500  
3M 8500 Superset  
3M 8700  
3M 8700 Superset  
3M HQ969  
3M HQ969 Superset  
3M M952  
3M M959 XL  
3M MIM  
3M MIM Superset  
3M P831  
Agfa DryStar 2000  
Agfa DryStar 3000  
Agfa LR3300  
Agfa LR5200  
Agfa MCL bitmap  
Agfa MCLplusMIN  
Fuji FL- IM2636  
Fuji FL- IM3535  
Fuji FL- IM3543  
Fuji FLIM - D  
Fuji FM - DP3543  
Fuji FM-DPL  
Helios M952  
Kodak KELP100  
Kodak KELP100plusKEIM  
Kodak KELP100XLP  
Kodak KELP1120  
Kodak KELP2180  
Kodak MLP-190  
Konica LI10/LI21  
Philips EVL1000  
Sterling LLI  
Sterling LP400  
Sterling SIJ400**

## 1.2.1.2. DICOM

Printer configuration editor

Interface type ☒ DICOM

Printer type ☐ 3M 8500

Printer name ☐ 3M 8700

DICOM printer AE title ☐ Agfa DryStar 2000 COLOR/BW DICOM

☐ Agfa DryStar 3000 DICOM

☐ Agfa LR3300 DICOM

☐ Agfa LR5200 DICOM

☐ Agfa MCL bitmap

☐ Kodak MLP-190

Edit configured media list...

Proceed Cancel

## 1.2.1.3. Network

Printer configuration editor

Interface type ☒ network

Printer type ☐ Polaroid Helios

Printer name

Network service name

Edit configured media list... Advanced printer settings...

Proceed Cancel

## 1.2.1.4. SCSI

Printer configuration editor

Interface type ☒ SCSI

Printer type ☐ 3M 8300 SCSI Landscape

Printer name ☐ 3M 8300 SCSI Portrait

☐ Codonics EP1600

☐ Kodak XLT7720

Edit configured media list... Advanced printer settings...

Proceed Cancel

## 1.2.1.5. File

Printer configuration editor

Interface type ☒ file

Printer type ☐ Paper printer A4

Printer name ☐ Paper printer Letter

☐ Philips to file

Edit configured media list... Advanced printer settings...

Proceed Cancel

## 1.2.2. EasyVision RAD R4.2.L2

### 1.2.2.1. PCI

Listed below are the names of the PCI Laser Hardcopy Units supported by and compatible with EasyVision RAD R4.2 L2

<input type="checkbox"/> 3M 8300 Portrait	<input type="checkbox"/> Fuji FL-IM D
<input type="checkbox"/> 3M 8500	<input type="checkbox"/> Fuji FL-IM2636
<input type="checkbox"/> 3M 8500 Superset	<input type="checkbox"/> Fuji FL-IM3535
<input type="checkbox"/> 3M 8700	<input type="checkbox"/> Fuji FL-IM3543
<input type="checkbox"/> 3M 8700 Superset	<input type="checkbox"/> Fuji FM-DP L
<input type="checkbox"/> 3M HQ969	<input type="checkbox"/> Fuji FM-DP2636
<input type="checkbox"/> 3M HQ969 Superset	<input type="checkbox"/> Fuji FM-DP3543
<input type="checkbox"/> 3M M952	<input type="checkbox"/> HeliosM952
<input type="checkbox"/> 3M M959 XL	<input type="checkbox"/> Kodak KELP100
<input type="checkbox"/> 3M MIM	<input type="checkbox"/> Kodak KELP100plusKEIM
<input type="checkbox"/> 3M MIMSuperset	<input type="checkbox"/> Kodak KELP100XLP
<input type="checkbox"/> 3M P831	<input type="checkbox"/> Kodak KELP1120
<input type="checkbox"/> Agfa DryStar 2000	<input type="checkbox"/> Kodak KELP2180
<input type="checkbox"/> Agfa DryStar 3000	<input type="checkbox"/> Kodak MLP-190
<input type="checkbox"/> Agfa LR3300	<input type="checkbox"/> Kodak MLP-190
<input type="checkbox"/> Agfa LR5200	<input type="checkbox"/> Konica-LI10/LI21
<input type="checkbox"/> Agfa MCL bitmap	<input type="checkbox"/> Philips EVL1000
<input type="checkbox"/> Agfa MCL(plusMIN)	<input type="checkbox"/> Sterling LLI

### 1.2.2.2. DICOM

DICOM	
<input type="checkbox"/>	3M 8100
<input type="checkbox"/>	3M 8300 Portrait
<input type="checkbox"/>	3M 8500
<input type="checkbox"/>	3M 8700
<input type="checkbox"/>	3M HQ969
<input type="checkbox"/>	Agfa DryStar 2000 COLOR/BW DICOM
<input type="checkbox"/>	Agfa DryStar 3000 DICOM
<input type="checkbox"/>	Agfa LR3300 DICOM
<input type="checkbox"/>	Agfa LR5200 DICOM
<input type="checkbox"/>	Agfa MCL bitmap
<input type="checkbox"/>	Codonics NP1660MD DICOM
<input type="checkbox"/>	Fuji FL-IM D
<input type="checkbox"/>	Fuji FM-DP L
<input type="checkbox"/>	Fuji FM-DP3543 DICOM
<input type="checkbox"/>	Kodak MLP-190
<input type="checkbox"/>	Sony UP-D70XR
<input type="checkbox"/>	Sterling LP400 Dicom
<input type="checkbox"/>	Sterling SIJ400 Dicom





### 1.2.2.3. SCSI

SCSI	
<input type="checkbox"/>	3M 8300 SCSI Landscape
<input type="checkbox"/>	3M 8300 SCSI Portrait
<input type="checkbox"/>	Codonics EP1600
<input type="checkbox"/>	Kodak XLT7720
<input type="checkbox"/>	Sony UP-D70XR

#### 1.2.2.4. Network

Interface type	 network
Printer type	 Polaroid Helios

#### 1.2.2.5. File

Interface type	 file
Printer type	 Paper printer A4
Printer name	 Paper printer Letter
	 Philips to file

### 1.3. ORDERING INFORMATION

#### 1.3.1. PCI connection

The EasyVision is delivered without any cables (data & control) for imager interfacing.

#### 1.3.2. Ethernet connection

Only for imagers connected to the Ethernet (DICOM, FTP or HSTP protocol) the network kits are available. One of these is normally always present.

#### 1.3.3. SCSI connection

The maximum total SCSI cable length is 3 meter. With EasyVision system R4.2 a maximum configuration of 2.9 meter is used (without the CD recordable option 1.7 meter). Depending on the SUN system installed a SCSI wide (68 pins) or SCSI narrow (50 pins) connector is used.

The correct cables including a SCSI booster are supplied with the Codonics printer (if ordered via Philips). In case you connect an other type of SCSI printer you must never exceed the maximum of 3 meter. The following cables can be ordered:

- 4522 163 15581: 0.15 meter (50P - 50P), to connect from the CD recordable to the SCSI booster.
- 2422 076 00278: 1.0 meter (68P - 50P), to connect from the peripheral 4 enclosure (used in the SUN ULTRA) to the SCSI booster.
- 4522 090 02811: 1.0 meter (50P - 50P), to connect from the peripheral 4 enclosure (used in the SUN SS-5) to the SCSI booster.
- 4522 500 36841: SCSI booster 110V
- 4522 500 36831: SCSI booster 230V
- 4522 500 36821: SCSI cable 15 feet

#### **1.3.4. Parallel port connection**

Posts script printers are connected to the parallel port of the EasyVision. The maximum cable distance is 3 meters.

### **1.4. FUNCTIONAL DESCRIPTION**

#### **1.4.1. EasyPrint**

The EasyVision print function is called 'EasyPrint'. EasyPrint takes a quite different approach to printing than most medical modalities. Traditional systems send single images to the camera and depend on the camera to layout the images on the sheet. This leads to duplication of demographic data on every image, resulting in films cluttered with text. EasyVision on the contrary composes the entire layout itself, giving unparalleled control over image quality and excellent flexibility in sheet composition, while at the same time minimizing the area taken up by text. Site and sheet specific data are contained in headers and footers, while image text is only printed if necessary and if desired. As the entire film sheet is prepared by EasyPrint and the laser camera is only used to print it, the film layout does not depend on the layouts offered by the various imager manufacturers. EasyPrint may print using predefined layout protocols, but manual composition of a layout is also possible. That is why EasyPrint offers, for any imager, such a wide variety of layouts, including combinations of large and small images and non-square layouts for shuttered studies.

The printing of an entire film set can be initiated from EasyVision itself by selecting a study and placing it in the EasyVision internal hardcopy spooler. All processing will be performed in the background by EasyVision.

#### **1.4.2. Film size and Media Selection**

If the imager allows film size and/or type selection the user may select film size and/or type to print on. If the film size or type is not currently and the imager supports film size and/or type detection, the print will be held in the queue of the EasyVision.

EasyVision may be configured to allow only selection of the film size and type locally used. The locally not available film sizes and film types must be deselected. If these are not deselected the operator / user is may erroneously specify them, but they will be put in the queue and never printed unless the required film becomes available.

#### **1.4.3. Connection possibilities (client, workspot & single user workstation)**

##### **1.4.3.1. Point to Point connection (PCI bus card)**

On a Server or a Single user workstation a point to pint connection to a printer can be present. Required for this is a Sbus / PCI HCU control board. The data and control cables are not delivered with the EasyVision, but are part of the imager.

##### **1.4.3.2. SCSI**

On a Server, Workspot or Single user workstation a SCSI printer can be connected. The maximum distance of the SCSI chain is 3 meter. Depending on the configuration special SCSI cables and hardware are required. See the specific SCSI printers for the possibilities.

### 1.4.3.3. Ethernet

On a Server or a Single user workstation a network printer can be connected. Depending on the printer the following protocols are used:

- R4.2.x.x
  - DICOM
  - HSTP (Sterling Helios)

Refer to the specific printers for the possibilities.

### 1.4.3.4. Parallel port printers

On a Server, Workspot or Single user workstation (Depending on the release) a post script printer can be connected.

### 1.4.4. Resolution

EasyVision internal image data calculations are 12 bits wide. Depending on the connected printer and the protocol the images are sent to the printer in:

- 8 Bits Grey
- 12 Bits Grey
- Color
- HiRes 8 Bits Grey
- HiRes 12 Bits Grey

Note: Color printing can be done in **P**ixel Interleaved (RGB\_PI) or **B**and Interleaved (RGB\_BI)

### 1.4.5. Printer Memory size

The memory size required in the imager depends on the used film resolution and pixel depth. Calculation is as follows:

- 8 bit Grey  
Matrix size: e.g.  $4256 * 5174$  (14 \* 17")  
Required memory  $4256 * 5174 = 22\text{MB}$
- 8 bit Grey Hires  
Matrix size: e.g.  $4256 * 5174$  (14 \* 17")  
Required memory  $4256 * 5174 * 4 = 88\text{MB}$
- 12 bit Grey  
Matrix size: e.g.  $4256 * 5174$  (14 \* 17")  
Required memory  $4256 * 5174 * 2 = 44\text{MB}$
- 12 bit Grey Hires  
Matrix size: e.g.  $4256 * 5174$  (14 \* 17")  
Required memory  $4256 * 5174 * 8 = 176\text{MB}$

The memory size as calculated is most of the times not the standard available. Each printer supplier has different building blocks e.g. 16MB or 32MB. The installed memory must be larger than the calculated memory required.

## 1.5. IMAGE QUALITY

Because EasyVision is film-oriented, it will compose an entire film sheet and send it to the imager as one sheet-filling image (a one on one format).

### 1.5.1. Density calibration

EasyVision does all image data calculations, including LUT operations itself. Before an imager is used with EasyVision a calibration must be performed. EasyVision uses this calibration data. There is some disadvantage in doing all image data calculations in EasyVision:

- The actual response of the camera is measured and entered as a reference used by EasyVision. Changes or re-calibration of the laser will require a re-calibration of EasyVision.

Previously EasyVision lookup operations were 8-bit, causing holes in the histogram. With the introduction of Release 4.2 all calculations are 12 Bit wide.

When multiple EasyVisions are connected in a cluster / network, the density calibration must be performed on the EasyVision which is connected to the imager.

#### 1.5.1.1. Density Calibration procedure GreyScale images

All laser imagers that are released within PMS have a lookup table that can print a linear perception step pattern. If this lookup table is applied, there is no need for calibration in the host. However, fluctuations in film and processor chemicals will influence the output. The first step to be taken is to calibrate the laser imager.

Procedure:

1. Calibrate the laser camera for a maximum density of 3.0
2. Print a linear test pattern from the host in 16 steps.
3. Measure the 16 values.
4. If the 16 measured values are within the limits below, make sure that the host uses a linear lookup table.
5. If the 16 values are outside the range, first check the film, the processor and the lookup table in the camera, before calibrating the host

Step	Min	Goal	Max
1	17	21	25
2	27	21	35
3	37	41	45
4	45	50	55
5	55	60	65
6	67	72	78
7	78	84	90
8	91	97	103
9	103	110	117
10	119	126	133
11	135	143	151
12	154	162	170
13	175	184	193
14	203	213	223
15	239	250	261
16	287	300	313

### 1.5.1.2. Density Calibration procedure Color images

There is no calibration procedure for color images.

### 1.5.2. True size calibration

The true size calibration for point to point (PCI) and network imagers must be performed on the EasyVision Server or Single user workstation.

The true size calibration for SCSI imagers must be performed on the EasyVision Server, Workspot or Single user workstation.

#### NOTE

*If the laser imager is re-adjusted, you must verify the density and the true size film calibration.*

---



## 1.6. SERVICE NOTES

This section provides information on solving problems that may be encountered when configuring and/or operating this installation.

### 1.6.1. PCI

1. Symptom

Images printed directly from the MR or CT do not have the same look as images printed via the EasyVision.

Cause

The MR and CT system do not have calibration possibilities and use the lookup table in the printer. The images printed via EasyVision are calibrated to the target curve. The two input channels of the printer use the same lookup table. Although the target curve for the EasyVision equals the lookup table curve of the printer input, there will still be a difference in density between the two channels.

Remedy

Calibrate the EasyVision with the default values instead of the measured values and fill in the minimum and maximum density values in the EasyVision menu. The EasyVision is now calibrated linear. Now both channels will have the same density values.

2. Symptom

EasyVision cannot contact the imager.

Cause

Bad communication for some reason.

Remedy

Try to diagnose the control line for a PCI connected imager. Verify the network connection for a Ethernet connected imager.

3. Symptom

Application does not start up and returns to the start-up menu.

Cause

The printer connected interferes with the application.

Remedy

Disconnect the data and control line and verify if the application works properly. The problem also occurred with a DuPont imager and was reproducible.

4. Symptom

A black screen with the copyright panel is visible on the CRT and the system is in a hang-up situation.

Cause

The printer connected interferes with the application.

Remedy

Disconnect the data and control line and verify if the application works properly. If so, the AGFA input board is probably defect. The problem is reproducible.

5. Symptom

Some times bad communication.

Cause

The data and control cable can not make proper contact with the EasyVision split box due to too long fixing nuts.

Remedy

Replace the split box with a splitable 12NC: 4522 106 05441.

**1.6.2. DICOM**1. Symptom

Bad image quality on DICOM printers.

Cause

An EV DICOM print does not give a proper Image Quality (byte swap).

The problem occurs with Agfa DICOM printers when Explicit Big Endian has been configured. If done with Automatic configuration Explicit Big Endian is enabled.

Remedy

Use Implicit Little Endian ONLY!!!!!! Solved in R4.2.

## 1.7. FAULT FINDING

The Printer Test program tests the combination of the software (which is configured for a specific printer) and the Printer connected to EasyVision. The test runs as a 'stand-alone' program (separate from the Application) but uses the same imager protocol handlers as the Application does.

To access the service menu environment select 4 (go to service menu) in the Startup Menu. Then at the password: prompt enter password

### 1.7.1. Service menu

```
Service Menu
=====,
```

```
1      Diagnostics Menu      (sunvts and product diagnostics)
2      SunOS Menu            (optical disk format and SunOS commands)
3      File Menu              (file transfer and manipulation commands)
4      Printer Menu           (Printer tests)
5      Monitor Menu
6      PCR Systems

0      Logout
```

Enter the number of your choice: 4

### 1.7.2. Printer menu

```
Printer Menu
=====
```

```
1      HCU Calibration
2      Start Printer Status Request
3      Start Data Channel Printer Test
      Data is sent to the HCU via the data channel, then
      press print on the HCU control panel for output
4      Start Printer Test
5      Start S-bus/PCI Printer Visual Interface Test (Led board required)

0      Return to Service Menu
```

### 1.7.3. Start Printer Status Request

Enter the number of your choice: 1

```
This test takes about 50 seconds.
starting setup database server ....
    1. Codonics EP1600
    2. DryStar 3000
    3. file
    --. skip remote hardcopy unit orpheus
```

```
Select the desired printer: 2
Printer DryStar 3000 selected for test
Opening printer...
    Opening printer failed, retrying...
printer Printer3M_Agfa at node /dev/easy/hc0 reports status ok
```

'Printer Status Request' ended normal, status 0.  
Control channel is OK (printer controller, control cable,  
printer command interpretation).  
Data channel status still has to be checked.

Press Enter to continue:

#### 1.7.4. Start Data Channel Printer Test

Printer Menu  
=====

- 1 Start Printer Status Request
- 2 Start Data Channel Printer Test  
Data is sent to the HCU via the data channel, then  
press print on the HCU control panel for output
- 3 Start Printer Test
- 4 Start S-bus Printer Interface Test (HCU testbox required)
- 5 Start S-bus Printer Visual Interface Test (Led board required)
  
- 0 Return to Service Menu

Enter the number of your choice: 2

This test has been designed to check data channel integrity.  
This program places image data at the interface.  
Image acquisition is initiated from the HCU.  
Please make sure the control cable has been disconnected.  
After image acquisition has been initiated at the HCU  
press 'Enter' to transmit image data

Write failed(Timer expired)

**Note:** The reason for this error is that the image acquisition is not done on the HCU.

#### 1.7.5. Start Printer Test

Printer Menu  
=====

- 1 Start Printer Status Request
- 2 Start Data Channel Printer Test  
Data is sent to the HCU via the data channel, then  
press print on the HCU control panel for output
- 3 Start Printer Test
- 4 Start S-bus Printer Interface Test (HCU testbox required)
- 5 Start S-bus Printer Visual Interface Test (Led board required)
  
- 0 Return to Service Menu

Enter the number of your choice: 3

starting setup database server ....

EasyVision printer test

Wed Dec 17 17:45:09 1997

This test program tries to detect configuration errors in the printer.  
The program will force error conditions and tries to recover from them.  
After program termination the results can be reviewed in the file

'PTResult', which can be found via the entry 'log file directory' in the service menu.

```
local host name: pan, entry hostName: pan
  1. Codonics EP1600
local host name: pan, entry hostName: pan
  2. DryStar 3000
local host name: pan, entry hostName: pan
  3. file
local host name: pan, entry hostName: orpheus
  --. skip remote hardcopy unit orpheus
```

Select the desired printer: 2  
Printer DryStar 3000 selected for test

```
Printer configuration of sbus_0_pan_AE
  manufacturer      Agfa
  printer model      DryStar-3000
  autoCalibrated     NO
  fixedResolution    NO
  type handling      NO
  printer class      Printer3M_Agfa
  node name          /dev/easy/hc0
  medium 14x17 blue base
    medium size      14x17
    medium type       blue_base
    matrix size       4256 x 5172
    resolution        12.4 not calibrated
    colormap name     GREY_8
    gammacorrection   not calibrated
    default correction standard
  medium 14x17 clear base
    medium size      14x17
    medium type       clear_base
    matrix size       4256 x 5172
    resolution        12.4 not calibrated
    colormap name     GREY_8
    gammacorrection   not calibrated
    default correction standard
  medium 14x17 opaque
    medium size      14x17
    medium type       opaque
    matrix size       4256 x 5172
    resolution        12.4 not calibrated
    colormap name     GREY_8
    gammacorrection   not calibrated
    default correction standard
```

OK: no error (Dec 17 17:45:25)  
printed 0 sheets as expected  
Select one of the following media

```
0: 14x17 blue base
1: 14x17 clear base
```

Choice : 0  
Selected medium 14x17 blue base.

### 1.7.5.1. run configuration test sequence

```
0: exit test
1: run configuration test sequence
```

```
2: run response test sequence
3: select and run test case
4: select medium
5: display printer configuration
```

Choice : 1

```
Start of printer configuration test sequence (Dec 17 17:45:39)
Starting test 1: standard print of one sheet (Dec 17 17:45:39)
```

```

The test prints a single sheet with no exceptional conditions
*****
OK: no error (Dec 17 17:47:15)
      printed 1 sheets as expected
Starting test 2: standard print of three sheets (Dec 17 17:47:15)

```

This test tries to print three sheets with no exceptional conditions.  
The test verifies the buffer management in normal operation.

```
*****
OK: no error (Dec 17 17:48:58)
      printed 1 sheets as expected
*****
```

```
OK: no error (Dec 17 17:50:40)
      printed 1 sheets as expected
*****
```

```
OK: no error (Dec 17 17:52:20)
      printed 1 sheets as expected
Starting test 3: line timeout > 50 sec (Dec 17 17:52:20)
```

The line timeout is tested to be at least 50 seconds  
Note that an overall timeout must also be large enough.

```

****.....*****
*****
OK: no error (Dec 17 17:54:51)
      printed 1 sheets as expected

```

Starting test 4: recover from line timeout (Dec 17 17:54:51)  
The test tries to force a line timeout and to recover from it.  
Note that not all printers support the line timeout. For  
these printers the test fails.

```
expecting result 10:Communication time out
or result 0:no user error
```

```
****.....
*****OK, expected error occurred. (Dec 17 17:56:53)
    printed 0 sheets as expected
    error Level:fatal error
    User:10 Communication time out
    Unix:62 Timer expired
    Printer:81 Image input failed
```

Try to recover from error. (Retry 1) (Dec 17 17:56:54)

```
*****
OK: successful recovery after 1 tries (Dec 17 17:58:41)
    printed 1 sheets as expected
```

Starting test 5: overall timeout at least 4 min (Dec 17 17:58:41)

The test waits 6 sec between data block transmissions. The total time for a sheet then becomes about 4 min.

[illegible]

```
OK: no error (Dec 17 18:03:55)
      printed 1 sheets as expected
```

Starting test 6: recove from overall timeout (Dec 17 18:03:55)  
The test waits 30 sec between data block transmissions.  
The total time for a sheet then becomes 20 min.  
This will result in an overall timeout failure from

```

        which the test tries to recover by printing one
        sheet in normal conditions.
expecting result 10:Communication time out
or result 0:no user error

```

A 10x10 grid of dots with stars placed at various intersections. The stars are located at the following (row, column) coordinates (starting from the top-left corner):

Row	Column
1	3
2	1
3	2
4	4
5	1
6	2
7	3
8	1
9	2
10	3

OK, optional expected error dit not occur. (Dec 17 18:26:22)  
printed 1 sheets as expected

### 1.7.5.2. select medium

```
0: exit test
1: run configuration test sequence
2: run reponse test sequence
3: select and run test case
4: select medium
5: display printer configuration
```

Choice : 4

OK, optional expected error did not occur. (Dec 17 18:27:36)  
printed 1 sheets as expected

Select one of the following media

```
0: 14x17 blue base
1: 14x17 clear base
```

Choice : 0  
Selected medium 14x17 blue base.

#### 1.7.5.3. display printer configuration

```
0: exit test
1: run configuration test sequence
2: run reponse test sequence
3: select and run test case
4: select medium
5: display printer configuration
```

Choice : 5

```
Printer configuration of sbus_0_pan_AE
manufacturer      Agfa
printer model     DryStar-3000
autoCalibrated    NO
fixedResolution   NO
type handling     NO
printer class     Printer3M Agfa
```

```

node name      /dev/easy/hc0
medium 14x17 blue base
    medium size      14x17
    medium type      blue_base
    matrix size      4256 x 5172
    resolution       12.4 not calibrated
    colormap name    GREY_8
    gammacorrection  not calibrated
    default correction standard
medium 14x17 clear base
    medium size      14x17
    medium type      clear_base
    matrix size      4256 x 5172
    resolution       12.4 not calibrated
    colormap name    GREY_8
    gammacorrection  not calibrated
    default correction standard
medium 14x17 opaque
    medium size      14x17
    medium type      opaque
    matrix size      4256 x 5172
    resolution       12.4 not calibrated
    colormap name    GREY_8
    gammacorrection  not calibrated
    default correction standard

```

#### 1.7.5.4. run response test sequence

```

0: exit test
1: run configuration test sequence
2: run reponse test sequence
3: select and run test case
4: select medium
5: display printer configuration

```

##### Choice : 2

Start of printer response test sequence (Dec 17 18:27:45)

Starting test 1: standard print of one sheet (Dec 17 18:27:45)

The test prints a single sheet with no exceptional conditions

\*\*\*\*\*

OK: no error (Dec 17 18:29:22)

printed 1 sheets as expected

Starting test 8: printer switched off (Dec 17 18:29:22)

The test checks the response when the printer is switched off.

Please switch printer off

press RETURN key to continue

Continue with test

expecting result 5:printer not found

\*\*\*\*\*

FAIL: expected errors (printerNotFound) did not occur. (Dec 17 18:31:59)

printed 1 sheets

Ok test fails, but tries again

TEST FAILS after 1 tries

**Note:** Reason for this error is that the printer is not switched off.

Please indicate continuation action



0: exit test program  
 1: retry this test  
 2: skip this test

Choice : 2

Starting test 9: media low (Dec 17 18:32:15)

The test checks the response when the media is low.

Note that not all printer support the media low condition.

Please Fill supply magazine with five sheets.

press RETURN key to continue

Continue with test

expecting result 1:media low

or result 0:no user error

\*\*\*^\*\*\*\*\*

OK, optional expected error did not occur. (Dec 17 18:34:02)

printed 1 sheets as expected

Starting test 10: supply magazine empty (Dec 17 18:34:02)

The test checks the response when the supply magazine is empty.

Please make supply magazine empty.

press RETURN key to continue

Continue with test

expecting result 2:no media

\*\*\*\*\*

FAIL: expected errors (noMedia) did not occur. (Dec 17 18:36:03)

printed 1 sheets

Ok test fails, but tries again

TEST FAILS after 1 tries

**Note:** Reason for this error is that there is film in the printer.

Please indicate continuation action

0: exit test program  
 1: retry this test  
 2: skip this test

Choice : 2

Starting test 11: receive magazine missing (Dec 17 18:36:13)

The test checks the response when the receive magazine is missing.

Please remove receive magazine

press RETURN key to continue

Continue with test

expecting result 3:no receive magazine

or result 6:Attention required

\*\*\*\*\*

FAIL: expected errors (noReceiveMagazine , attentionRequired) did not occur. (Dec 17 18:37:56)

printed 1 sheets

Ok test fails, but tries again

TEST FAILS after 1 tries

**Note:** The Reason for this error is that the receive magazine is not removed from the printer.

Please indicate continuation action

0: exit test program  
 1: retry this test

2: skip this test

Choice : 0

End of test (Dec 17 18:38:06)

Starting test 12: supply magazine missing (Dec 17 18:38:06)

The test checks the response when the supply magazine is missing.

Please remove supply magazine

press RETURN key to continue

#### 1.7.5.5. Local

For a local session the following text does appear:

Printer Menu

=====

- 1 HCU Calibration (start hardcopy unit calibration)
- 2 Start Printer Status Request
- 3 Start Data Channel Printer Test  
Data is sent to the HCU via the data channel, then  
press print on the HCU control panel for output
- 4 Start Printer Test
- 5 Start S-bus Printer Visual Interface Test (Led board required)
- 0 Return to Service Menu

**Enter the number of your choice: 4**

Connect Hardcopy testbox. Press Enter to continue:

starting setup database server ....

1. dryview

Printer dryview selected for test

Testing Hardcopy Interface with external diagnostic board

Test of control signals on command channel

Test data transfer on command channel

Test of data channel

Interface test successfully executed, return value: 0

'S-bus Printer Interface Test' ended normal, status 0

Control channel and Data channel are both OK up to testbox.

Press Enter to continue:

#### 1.7.5.6. Remote

For a remote connection (via serial port) the following text will appear:

- 1 Start Printer Status Request
- 2 Start Data Channel Printer Test  
Data is sent to the HCU via the data channel, then  
press print on the HCU control panel for output
- 3 Start Printer Test
- 4 Start S-bus Printer Interface Test (HCU testbox required)
- 5 Start S-bus Printer Visual Interface Test (Led board required)
- 0 Return to Service Menu

**Enter the number of your choice: 4**

Connect Hardcopy testbox. Press Enter to continue:

starting setup database server ....

```

1. dryview
Printer dryview selected for test
Interface test successfully executed, return value: 0

'S-bus Printer Interface Test' ended normal, status 0
Control channel and Data channel are both OK up to testbox.

Press Enter to continue:

```

### 1.7.6. Start S-bus Printer Visual Interface Test (Led board required)

```

Printer Menu
=====

1      Start Printer Status Request
2      Start Data Channel Printer Test
      Data is sent to the HCU via the data channel, then
      press print on the HCU control panel for output
3      Start Printer Test
4      Start S-bus Printer Interface Test (HCU testbox required)
5      Start S-bus Printer Visual Interface Test (Led board required)

0      Return to Service Menu

```

**Enter the number of your choice: 5**

Connect led board. Press Enter to continue:  
 This test has been designed to operate with the LED board  
 and data channel and command channel loopback connectors.  
 The lights on the LED board will go on and off in sequence  
 The LED board and loopback connectors may be placed at the far  
 end of the cables in order to test cable integrity.

Please connect the LED board and the loopback connectors  
 and press 'Enter' when ready

Test succeeded for '/dev/easy/hc0'

'S-bus Printer Visual Interface Test' ended normal, status 0  
 Control channel and Data channel are both OK up to led board.

Press Enter to continue:

## 1.8. FAULT FINDING CONTROL & DATA LINE

The control line can be monitored with a special test tool and a service PC. The log file of the control line can be analyzed by the service engineer or the PMG.

See Printer Faultfinding Service Manual - Unit, which is enclosed in this binder.

## 2. CONNECTIVITY AGFA

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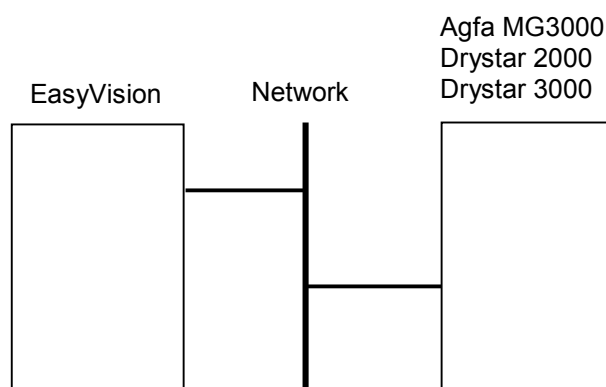
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## 2.1. INTRODUCTION

This section describes various aspects of the connection / interfacing of a Philips EasyVision RAD to AGFA laser imagers. For the installation and configuration procedures refer to the corresponding service and release manuals. This document contains information for service engineers (Philips & AGFA) to verify if the setup is identical to that tested and released by the PMG.

## 2.2. DICOM configuration

### 2.2.1. Basic DICOM configuration



### 2.2.2. Required parameters without subnet

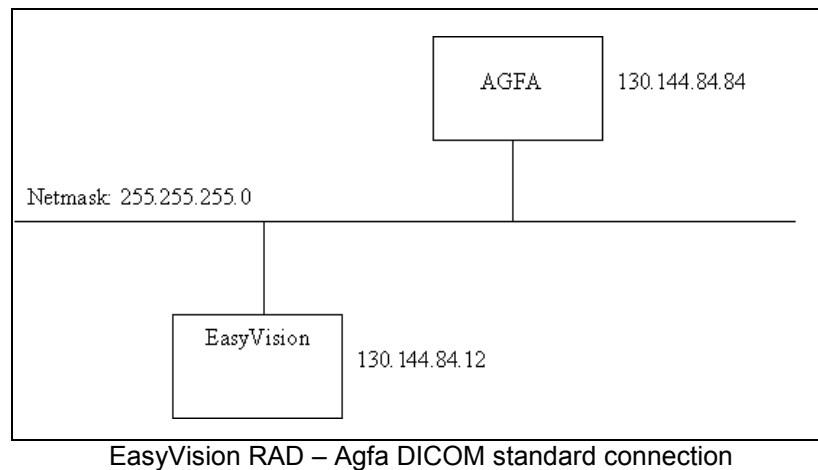
#### 2.2.2.1. Parameters

Required:

Parameter	Agfa name	Agfa value (examples)		Philips name	Philips value (examples)
Memory	Memory	See verification		N.A.	N.A.
Software versions	Software	See verification		N.A.	N.A.
Hostname	hostname	D2CON1		IP node name	D2CON1
IP address	inet_addr	130.144.84.84	*	IP address	130.144.84.84
AE title	apip_dest	D2CON1	*	Application entity title	D2CON1
Port number	local_port	104	*	Port number	104
	N.A.	N.A.		DICOM node system name	Freely selectable

\*: Minimum required Agfa information as input for Philips.

**NOTE**      *The SCP Store must be disabled after the auto-configure operation.*



### 2.2.2.2. Verification

In order to verify the required settings needed from Agfa you can start a telnet session on the Agfa imager.

Today is Wed, 15 Jul 1998 12:36:53 +0000

```

=====
= RESTRICTED ACCESS FOR AGFA-GEVAERT NV. SERVICE PERSONNEL ONLY =
=====

```

Login: mega  
Password: adonis

Type “adonis” and press enter.

```

*****
* Welcome to MG3000 Telnet Server!
*
* Be careful in what you are doing!
* This is a medical device, capturing images from patients,
* who's condition might be critical!
*****

```

```

evagfal_C:\>
evagfal_C:\>mg3000
884768136 ecu32940
884768136 aos32941
881163068 cad32941
884768136 MeGa3.32
xxxxxxxxxxx xx4402
887883212 OEM35276
895486800 dcm32947

```

Type “MG3000” and press enter.

Minimum required mega software version !!!.

Minimum required configuration software version !!!.

Minimum required dicom software version !!!.

```

evagfal_C:\>

```

```

evagfal_C:\> type info.dat

```

Type “type info.dat” and press enter.

```

Versions   : Portex=1.10  Monitor=4.23
Build date: 24-NOV-1997 12:23
Board ID   : 1 - GEMINI
SCSI ID    : 7
CPU type   : 68040 - 25.01 Mhz

```

Required CPU board !!!.

FPU type : 0  
 MEMORY : 120 MByte (free zone  
 starts at 00042b80)

**Required memory 32MB 8bits printing**

**Required memory 64MB 12bits printing.  
 Required memory 120MB Hires printing**

Kernel total\_worksize=461684  
 FileSystem total\_worksize=98304,  
 used\_worksize=6472, errors=0  
 VME\_ext A16D16 = ef000000 int  
 A24D16 = 00100000  
 VME\_ext A16D32 = ee000000 int  
 A24D32 = 00100000  
 VME\_ext A24D16 = ed000000 int  
 A32D16 = 10000000  
 VME\_ext A24D32 = ec000000 int  
 A32D16 = 10000000  
 NIP board is present

evagfal\_C:\>

evagfal\_C:\> nve

**Type "nve" and press enter.**

Task	Instances
ARTXXX00	{0..23}
SYSXXX00	{0..0}
MGAXXX00	{0..0}
MFSXXX00	{0..0}
RTTXXX00	{0..0}
ETSXXX00	{0..0}
NETXXX00	{0..0}
MFXXXX00	{0..0}
KLDXXX00	{0..0}
BMDXXX31	{0..0}
ACQXXX01	{0..0}
VSIXXX01	{0..0}
MNUXXX01	{0..64}
LCDXXX01	{0..0}
ACQXXX02	{0..0}
VSIXXX02	{0..0}
MNUXXX02	{0..64}
LCDXXX02	{0..0}
ACQXXX03	{0..0}
MFRXXX03	{0..0}
MNUXXX03	{0..64}
LCDXXX03	{0..0}
AMIXXX03	{0..0}
CMNXXX11	{0..0}
CPEXXX11	{0..0}
ICRXXX11	{0..0}
NIPXXX11	{0..0}
DSPXXX11	{0..0}
CPDXXX11	{0..0}
ICIXXX11	{0..0}
AMEXXX11	{0..0}
FOIXXX11	{0..0}
ALFXXX11	{0..0}
HUBXXX11	{0..0}
TIFXXX40	{0..0}
CMNXXX21	{0..0}
ETHXXX21	{0..0}
CMNXXX22	{0..0}
PMSXXX22	{0..0}
CMNXXX23	{0..0}

**At least one PMSXXXxx must be present (All other entries are not relevant for DICOM print)!!!.**



```
PMSXXX23      {0..0}
```

```
evagfal_C:\> nve ART0 1
apip_dest "D2CON1"
available 1
dest_type 4402
n_io_id 11
e_io_id 11
inet_addr "130.144.84.84"
```

```
port 3027
protocol "TCP"
hostname "evagfal"
>
evagfal_C:\> nve PMSXXX22
local_port 104
```

```
pms_reject 1
mms_pms 10 3 2 10
max_pdu_length 65536
extra_logging 0
media_sizes 255
modality "AM"
patient_id_stem "MG"
UID_stem "1.3.51.0.1"
if_using_pmstst 0
nevent_enabled 0
film_type 0
no_copies 1
film_backg 255 0 0 0
non_exp 255 0 0 0
magnif_type 2
smooth_factor 140
dbmin 100
dbmax 35000
cs_table 0
trim_flag 1
utl_id 3
utl_subid 0
printer_type 1
text_flag 0
annotation1 ""
annotation2 ""
annotation3 ""
annotation4 ""
annotation5 ""
annotation6 ""
polarity 0
rotation 0
metric_printing 0
image_numbering 0
bw_wwidth "256"
bw_wcenter "128"
color_wwidth "256"
color_wcenter "128"
resolution 10000
ipl_id 0
ipl_subid 0
add_WL 0
pms_prio 101
img_prio 101
pms_tmo -1
```

**Type “nve ART0 1” and press enter .  
AE title required by EasyVision RAD !!!.**

**Printer IP address required by EasyVision RAD  
!!!.**

**Press enter to return to prompt.  
Type “nve PMSXXX22” and press enter.  
The port number required by the EasyVision  
RAD !!!.**

```
img_tmo 60
confirmLevel 0
>
evagfa1_C:\>
Disconnect the telnet session in a
proper way.
Disconnected From Host
```

**Press enter to return to the prompt.**

**Disconnect the telnet session.**

### 2.2.3. Requirements when subnet is used

#### 2.2.3.1. parameters

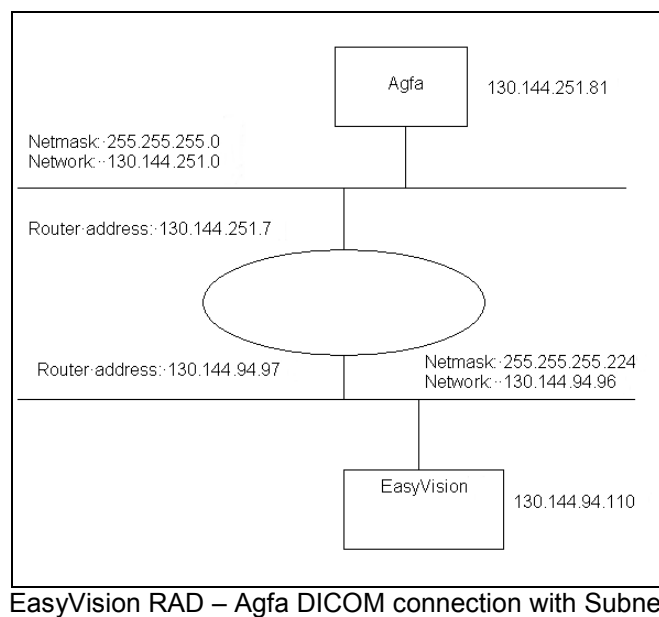
Required information:

Parameter	Agfa name	Agfa value (examples)	Philips name	Philips value (examples)
Hostname	hostname	evagfa1	IP node name	evagfa1
IP address	inet_addr	130.144.251.81 *	IP address	130.144.251.81
AE title	apip_dest	EVAGFA1 *	Application entity title	EVAGFA1
Port number	local_port	104 *	Port number	104
			DICOM node system name	Freely selectable
Router	gateway	130.144.251.7 **	Router	130.144.94.97
Network	destination	130.144.94.96 **		
Subnetmask			Netmask	255.255.255.224

\*: Minimum required Agfa information as input for Philips.

\*\*: Minimum required information for Agfa.

**NOTE** *The SCP store must be disabled after the auto-configure operation*



#### 2.2.3.2. Verification if connected via Subnet

The other required information verification is done in the previous chapter.

Today is Wed, 15 Jul 1998 12:39:44 +0000

```
=====
= RESTRICTED ACCESS FOR AGFA-GEVAERT NV. SERVICE PERSONNEL ONLY =
=====
```

Login: mega  
Password: adonis

**Type “adonis” and press enter.**

```
*****
* Welcome to MG3000 Telnet Server!                      *
*                                                         *
* Be careful in what you are doing!                      *
* This is a medical device, capturing images from patients, *
* who's condition might be critical!                    *
*****
```

```
evagfal_C:\> nve RTTXXX00
subnetmask "255.255.255.0"
rtt_table[0].destination 130.144.94.96"
rtt_table[0].gateway "130.144.251.7"
rtt_table[1].destination ""
rtt_table[1].gateway ""
rtt_table[2].destination ""
rtt_table[2].gateway ""
rtt_table[3].destination ""
rtt_table[3].gateway ""
rtt_table[4].destination ""
rtt_table[4].gateway ""
rtt_table[5].destination ""
rtt_table[5].gateway ""
rtt_table[6].destination ""
rtt_table[6].gateway ""
rtt_table[7].destination ""
rtt_table[7].gateway ""
rtt_table[8].destination ""
rtt_table[8].gateway ""
rtt_table[9].destination ""
rtt_table[9].gateway ""
arp_table[0].internet_addr ""
arp_table[0].ethernet_addr ""
arp_table[1].internet_addr ""
arp_table[1].ethernet_addr ""
arp_table[2].internet_addr ""
arp_table[2].ethernet_addr ""
arp_table[3].internet_addr ""
arp_table[3].ethernet_addr ""
arp_table[4].internet_addr ""
arp_table[4].ethernet_addr ""
arp_table[5].internet_addr ""
arp_table[5].ethernet_addr ""
arp_table[6].internet_addr ""
arp_table[6].ethernet_addr ""
arp_table[7].internet_addr ""
arp_table[7].ethernet_addr ""
arp_table[8].internet_addr ""
arp_table[8].ethernet_addr ""
```

**Type “nve RTTXXX00” and press enter.**

**Required for subnet printing !!!.**  
**Required for subnet printing !!!.**  
**Required for next Subnet printed from.**

**Required for next Subnet printed from.**

**Required for next Subnet printed from.**

**Required for next Subnet printed from.**

```
arp_table[9].internet_addr ""
arp_table[9].ethernet_addr ""
host_table[0].hostname ""
host_table[0].hostaddress ""
host_table[1].hostname ""
host_table[1].hostaddress ""
host_table[2].hostname ""
host_table[2].hostaddress ""
host_table[3].hostname ""
host_table[3].hostaddress ""
host_table[4].hostname ""
host_table[4].hostaddress ""
host_table[5].hostname ""
host_table[5].hostaddress ""
host_table[6].hostname ""
host_table[6].hostaddress ""
host_table[7].hostname ""
host_table[7].hostaddress ""
host_table[8].hostname ""
host_table[8].hostaddress ""
host_table[9].hostname ""
host_table[9].hostaddress ""
>
evagfal_C:\>
Disconnected From Host
```

**Press enter to return to the prompt.**

**Disconnect the telnet session.**

## Basic DICOM configuration

2.3. AGFA LR5200

2.3.1. Type of connection

The AGFA connection possibilities are:

- SBUS / PCI, AMDI-C protocol (RS422, E, 1200, 8, 1)
- Ethernet, DICOM

2.3.2. Ordering Information

2.3.2.1. SBUS / PCI

For a SBUS / PCI (point to point) connection the following can be ordered:

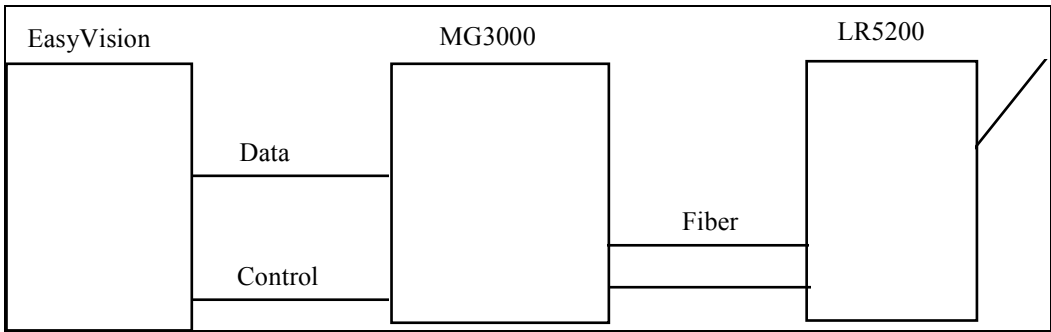


Figure 1

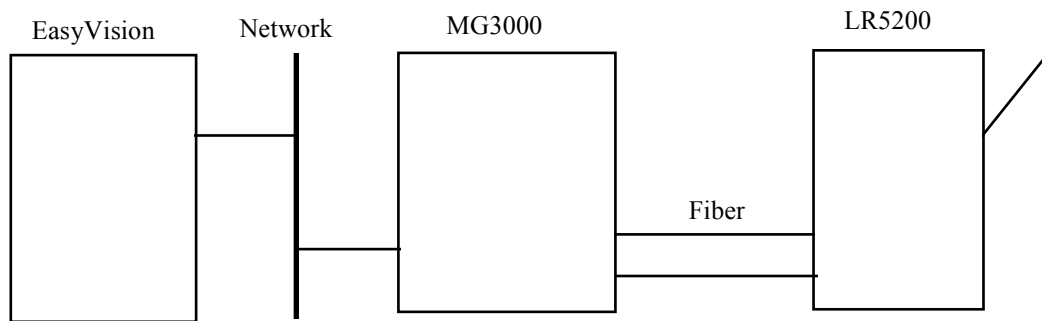
- |    |                                |       |
|----|--------------------------------|-------|
| 1. | MG3 IF Kit Bravo 01 (see note) | 3NMUR |
|----|--------------------------------|-------|

NOTE

*Since almost all interface kits with the MFRI board have the same ABC code, it is very important to specify which host system is involved at the time of ordering. This will ensure that all necessary parts will be delivered, including any adapter cables.*

- |    |                    |       |
|----|--------------------|-------|
| 2. | MG3 AMDI RS422 CBL |       |
|    | 5m                 | 3NJ2T |
|    | 15m                | 3NJ3V |
|    | 30m                | 3NJ4X |
|    | 60m                | 3NJ5Z |
|    | 90m                | 3NJ6Z |
| 3. | MG3 IMAGE CBL 37p  |       |
|    | 5m                 | 3NJ98 |
|    | 15m                | 3NKAD |
|    | 30m                | 3NKBF |
|    | 60m                | 3NKCH |
|    | 90m                | 3NKDK |

### 2.3.2.2. Ethernet



The network connection is always present at the modality side. No special items have to be ordered.

### 2.3.3. Configuration

#### 2.3.3.1. Philips

For the configuration procedure of EasyVision RAD refer to the release document.  
Configuration parameters per release:

- SBUS / PCI  
EasyVision RAD R4.2.: AGFA LR5200
- Ethernet DICOM  
EasyVision RAD R4.2.: AGFA LR5200 DICOM

#### 2.3.3.2. AGFA

At the initial installation of an MG3000/LR5200, all interface boards specified at the time of ordering are normally already mounted and have been correctly configured.  
The system and configuration software of the MG3000/LR5200 has already been loaded before delivery.

#### NOTE

*The MG3000/LR5200 is delivered ready to 'plug and play". If any problems are encountered, please contact SI-DIS in Munich immediately, they will forward all relevant information to the Connectivity Group.*

### 2.3.4. Functional Description

The AGFA imager has the possibility for two dispensers in which different magazines (film sizes) can be mounted by the user. The controller is able to report the media size but cannot report the media type (blue base or clear base). The controller reports in general those film size that have been configured for the controller and not the media that are actually present in the imager.

#### Keypad control

There is no manual keypad control possible.

### 2.3.5. Service Notes

This section provides information on solving problems that may be encountered when configuring and/or operating this installation.

#### 2.3.5.1. SBUS / PCI related

##### 1. Symptom

Only one film sheet printed with an image artifact (saw along the vertical lines) and the printer is in a hang-up situation.

##### Cause

The next logging is created with the printer test tool:

```
<EOT><ACK><SOH>4,
<EOT><ACK><SOH>5,0,189
<EOT><ACK><SOH>120,0,
<EOT><ACK><SOH>121,0,4,3,2,1,4,246
<EOT><ACK><SOH>6,
<EOT><ACK><SOH>7,0,191
<EOT><ACK><SOH>4,
<EOT><ACK><SOH>5,0,189
<EOT><ACK><SOH>2,0,0,
<EOT><ACK><SOH>3,0,0,0,115
<EOT><ACK><SOH>120,0,
<EOT><ACK><SOH>121,0,4,3,2,1,4,246
<EOT><ACK><SOH>10,4,
<EOT><ACK><SOH>11,0,234
<EOT><ACK><SOH>14,4200,5100,10000,
<EOT><ACK><SOH>15,0,238
<EOT><ACK><SOH>16,0,
<EOT><ACK><SOH>17,0,240
<EOT><ACK><SOH>24,1,
<EOT><ACK><SOH>25,0,239
<EOT><ACK><SOH>18,0,
<EOT><ACK><SOH>19,5,247
<EOT><ACK><SOH>19,0,242
<EOT><ACK><SOH>100,0,
<EOT><ACK><SOH>101,5,031
<EOT><ACK><SOH>101,0,026
<EOT><ACK><SOH>6,
<EOT><ACK><SOH>6,
<EOT><ACK><SOH>6,
<EOT><ACK><SOH>6,
<EOT><ACK><SOH>2,0,0,
```

**No correct response !!!**

The printer does not give the correct logout response after a correct data transfer.

##### Remedy

Is introduced by Agfa with MEGA 3.32 and solved with R4.2. and onwards by increasing the timeout to 1 minute. If no EasyVision R4.2 the only solution is swap the DAVID CPU board for a GEMINI CPU board which did solve the problem.

##### 2. Symptom

Only one film sheet printed and the printer is in a hang-up situation and displays on the keypad error B019.

##### Cause

Incorrect software loaded at the Agfa printer side.

Remedy

Agfa must install correct software.

3. Symptom

Film size 14\*14" not printed.

Cause

The matrix size is not correct implemented, landscape instead of portrait.

Remedy

Deselect the 14\*14" film format. Solved in release 4.2.

**2.3.5.2. DICOM Related**1. Symptom

Film size 14\*14" not printed.

Cause

The matrix size is not correct implemented, landscape instead of portrait.

Remedy

Deselect the 14\*14" film format. Solved in release 4.2.

2. Symptom

No film is printed.

Cause

The maximum density, sent by DICOM is not within the calibrated range of the film (DICOM warning 0x0116).

Remedy

Make sure that the maximum density sent by EasyVision is 3.00 OD and Agfa must put the setting for maximum OD to at least 3.20 OD.

3. Symptom

The print job goes into ERROR on the keypad of the imager. On the engine display, the error FOI\_EFI\_DU can appear (derived error) and the engine will reset.

Cause

Not enough RAM memory for the pixel matrix on the imager (ICM problem).

Remedy

None. The job will never be printed.

Cause

Not enough workspace for NIP (nve NIPxxx11)

Remedy

Set the workspace to 245760 on the imager and the job will be printed.

4. Symptom

DICOM communication fails. EasyVision print queue remains unchanged.

Cause

Insufficient disk quota on the imager side.

Remedy

Pause the printer on the EasyVision user interface until a number of films are printed.



5. Symptom

Print job on opaque remains in the queue of the LR5200.

Cause

EasyVision sends a print job with dbmax defaulted at 3.00 on opaque film type.

Remedy

Upload the opaque dispenser until the DICOM job is sent. The default dbmax (3.50) will be used. The film will be printed after inserting the dispenser in the imager.

6. Symptom

Auto configure on the EasyVision does not work.

Cause

EasyVision uses the DICOM node system name as AE title for the auto-configuring.

Remedy

Enter the AE title in the DICOM node system name filed on the EasyVision and restart auto-configuring.

### 2.3.6. Tested Releases & Film Sizes

This paragraph provides a history of all software releases relevant to this interface, together with points to watch out for when using a particular release.

#### Philips

EasyVision  
RAD

Release 4.2.	: Released for installation.
<i>Matrices used SBUS / PCI</i>	: 4256 * 5172 14 * 17" 4256 * 4232 14 * 14" 4256 * 3300 11 * 14" 2996 * 4192 10 * 14" 2368 * 2972 8 * 10" (Blue base, clear base and opaque) Grey 8
<i>Matrices used DICOM</i>	: 4256 * 5172 14 * 17" 4256 * 4232 14 * 14" 4256 * 3300 11 * 14" 2996 * 4192 10 * 14" 2368 * 2972 8 * 10" (Blue base, clear base and opaque) Grey 8 and Grey 12
Release 4.2.X	: Released for installation.
<i>Matrices used SBUS / PCI</i>	: 4256 * 5172 14 * 17" 4256 * 4232 14 * 14" 4256 * 3300 11 * 14" 2368 * 2972 8 * 10" (Blue base, clear base and opaque) Grey 8
<i>Matrices used DICOM</i>	: 4256 * 5172 14 * 17" 4256 * 4232 14 * 14" 4256 * 3300 11 * 14" 2368 * 2972 8 * 10" (Blue base, clear base and opaque) Grey 8 and Grey 12 : 8512 * 10344 14 * 17" 8512 * 8464 14 * 14" 8512 * 6600 11 * 14" 4736 * 5944 8 * 10" (Blue base, clear base and opaque) Grey 8 / Hires and Grey 12 / hires for 8 * 10"

#### AGFA

MG3000/LR5200  
SBUS / PCI:

Rel. 1.3 (MEGA3P32)	: Released for installation.
Connectivity Release:	
MEGAACON OEM33064	: Released for installation.
• OEM 001.utl added	
MEGAACON OEM35276	: Released for installation. Required for R4.2.
DICOM	
MEGA3P32	: Released for installation.
MEGAACON OEM35276	: Released for installation. Required for R4.2.

#### NOTE

*It is recommended to use the latest software release, which is available on the AGFA BBS.*

2.4. AGFA DRYSTAR 2000

2.4.1. Type of connection

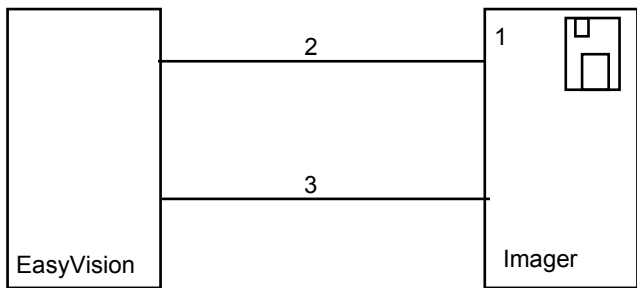
The connection possibilities are R4.2:

- SBUS / PCI, AMDI-C protocol (RS422, E, 1200, 8, 1)
- Ethernet, DICOM protocol

2.4.2. Ordering Information

2.4.2.1. SBUS / PCI

For a SBUS / PCI (point to point) connection the following can be ordered:



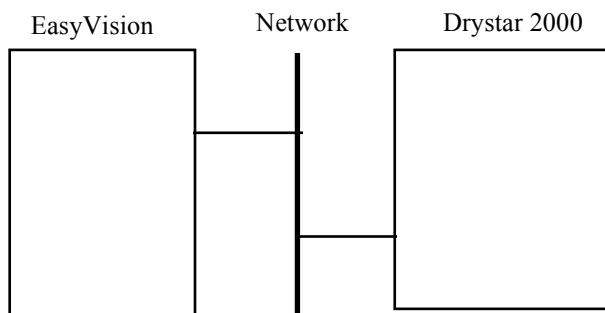
- |    |                                    |       |
|----|------------------------------------|-------|
| 1. | Drystar 2000 Digital interface kit |       |
|    | Factory option                     | 35RQ8 |
|    | Service upgrade                    | 35RZS |

NOTE

*Since almost all interface kits with the MFRI board have the same ABC code, it is very important to specify which host system is involved at the time of ordering. This will ensure that all necessary parts will be delivered, including any adapter cables.*

- 
- |    |                    |       |
|----|--------------------|-------|
| 2. | MG3 AMDI RS422 CBL |       |
|    | 5m                 | 3NJ2T |
|    | 15m                | 3NJ3V |
|    | 30m                | 3NJ4X |
|    | 60m                | 3NJ5Z |
|    | 90m                | 3NJ62 |
| 3. | MG3 IMAGE CBL 37p  |       |
|    | 5m                 | 3NJ98 |
|    | 15m                | 3NKAD |
|    | 30m                | 3NKBF |
|    | 60m                | 3NKCH |
|    | 90m                | 3NKDK |

2.4.2.2. Ethernet



The network connection is always present at the modality side. No special items have to be ordered.

### 2.4.3. Configuration

This paragraph describes which parameters must be configured.

#### 2.4.3.1. Philips

For the configuration procedure of the EasyVision RAD refer to the release document.  
Configuration parameters per release:

- SBUS / PCI  
EasyVision RAD R4.2.: **AGFA DRYSTAR 2000**
- Ethernet DICOM  
EasyVision RAD R4.2.: **AGFA DRYSTAR 2000 Color/BW DICOM**

#### 2.4.3.2. AGFA

The system and configuration software of the Drystar is already loaded before delivery.

Required:

Parameter	Agfa name	Agfa value (examples)		Philips name	Philips value (examples)
Memory	Memory	See verification		N.A.	N.A.
Software versions	Software	See verification		N.A.	N.A.
Hostname	hostname	D2CON1		IP node name	D2CON1
IP address	inet_addr	130.144.84.84	*	IP address	130.144.84.84
AE title	apip_dest	D2CON1	*	Application entity title	D2CON1
Port number	local_port	104	*	Port number	104
	N.A.	N.A.		DICOM node system name	Freely selectable

### 2.4.4. Functional Description

The AGFA imager has the possibility for one dispenser in which the user can mount one magazine. The AGFA imager has one film size and EasyVision RAD supports film type selection. However, since Agfa imagers do not report film type, images are only printed when the selected film type matches that available in the imager. If the types do not match, the image is accepted by the imager but stored on a hard disk in the imager.

#### Keypad control

There is no manual keypad control possible.

### 2.4.5. Notes

This section provides information on solving problems that may be encountered when configuring and/or operating this installation.

1. Symptom

Printing of color films with R4.1.1 is not possible via the network (FTP protocol).

Cause

Incorrect file location directory implemented.

Remedy

Patch available on the BBS, which should be installed. Not required for R4.2, due to the introduction of DICOM Color print.

2. Symptom

No film is printed.

Cause

The maximum density, sent by DICOM is not within the calibrated range of the film (DICOM warning 0x0116).

Remedy

Make sure that the maximum density sent by EasyVision RAD is 3.00 OD and AGFA should set this DMAX value on 3.20 OD.

3. Symptom

The print job goes into ERROR on the keypad of the imager. On the engine display, the error FOI\_EFI\_DU can appear (derived error) and the engine will reset.

Cause

Not enough RAM memory for the pixel matrix on the imager (ICM problem).

Remedy

None. The job will never be printed.

Cause

Not enough workspace for NIP (nve NIPxxx11)

Remedy

Set the workspace to 245760 on the imager and the job will be printed.

4. Symptom

DICOM communication fails. EasyVision print queue remains unchanged.

Cause

Insufficient disk quota on the imager side.

Remedy

Pause the printer on the EasyVision user interface until a number of films are printed.

5. Symptom

Print job on opaque remains in the queue of the LR5200.

Cause

EasyVision sends a print job with dbmax defaulted at 3.00 on opaque film type.

Remedy

Upload the opaque dispenser until the DICOM job is sent. The default dbmax (3.50) will be used. The film will be printed after inserting the dispenser in the imager.

6. Symptom  
Auto configure on the EasyVision does not work.

Cause

EasyVision uses the DICOM node system name as AE title for the auto-configuring.

Remedy

Enter the AE title in the DICOM node system name filed on the EasyVision and restart auto-configuring.

### 2.4.6. Tested Releases & Film Sizes

This section provides a history of all software releases relevant to this interface, together with points to watch out for when using a particular release.

#### Philips

EasyVision  
RAD

Release 4.2.	: Released for installation.
<i>Matrices used SBUS / PCI</i>	<i>: 2728 * 2048 8 * 10" Media type selection (Blue base and clear base opaque) Grey 8</i>
<i>Matrices used DICOM</i>	<i>: 2728 * 2048 8 * 10" Media type selection (Blue base and clear base opaque) Grey 8</i>
<i>Matrices used Network</i>	<i>: 2728 * 2048 8 * 10" Media type selection (Blue base and clear base opaque) Grey 8 and RGB-PI</i>
Release 4.2.	: Released for installation.
<i>Matrices used SBUS / PCI</i>	<i>: 2728 * 2048 8 * 10" Media type selection (Blue base and clear base opaque) Grey 8</i>
<i>Matrices used DICOM</i>	<i>: 2728 * 2048 8 * 10" Media type selection (Blue base and clear base opaque) Grey 8 and RGB-PI</i>

#### AGFA

Drystar 2000	R 4.40	
SBUS / PCI:	MEGA3P30	: Not tested.
	MEGA3P31	: Released for installation.
	MEGA3P32	: Released for installation.
	Connectivity Release: MEGACON OEM33064	: Released for installation.
DICOM:	MEGA3P32	: Released for installation.
	Connectivity Release: MEGACON OEM33064	: Released for installation.

#### NOTE

*It is recommended to use the latest software release, which is available on the AGFA BBS.*

2.5. AGFA DRYSTAR 3000

2.5.1. Type of connection

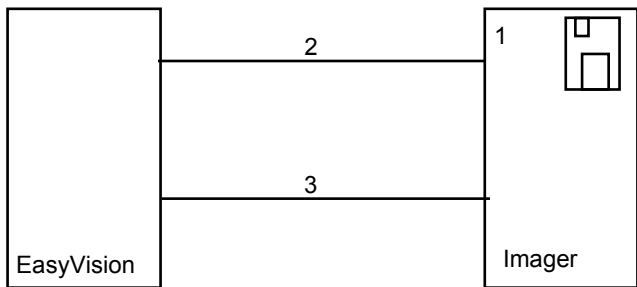
The AGFA connection possibilities are:

- SBUS / PCI, AMDI-C protocol (RS422, E, 1200, 8, 1)
- Ethernet, DICOM protocol

2.5.2. Ordering Information

2.5.2.1. SBUS / PCI

For a SBUS / PCI (point to point) connection the following can be ordered:



- |    |                                    |       |
|----|------------------------------------|-------|
| 1. | Drystar 3000 Digital interface kit |       |
|    | Factory option                     | 35N9U |
|    | Service upgrade                    | 35OHE |

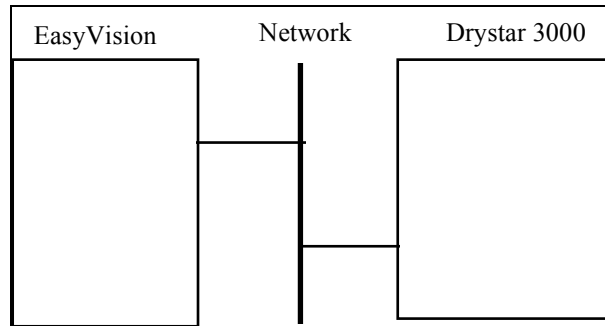
NOTE

*Since almost all interface kits with the MFRI board have the same ABC code, it is very important to specify which host system is involved at the time of ordering. This will ensure that all necessary parts will be delivered, including any adapter cables.*

- |    |                    |       |
|----|--------------------|-------|
| 2. | MG3 AMDI RS422 CBL |       |
|    | 5m                 | 3NJ2T |
|    | 15m                | 3NJ3V |
|    | 30m                | 3NJ4X |
|    | 60m                | 3NJ5Z |
|    | 90m                | 3NJ62 |
| 3. | MG3 IMAGE CBL 37p  |       |
|    | 5m                 | 3NJ98 |
|    | 15m                | 3NKAD |
|    | 30m                | 3NKBF |
|    | 60m                | 3NKCH |
|    | 90m                | 3NKDK |



### 2.5.2.2. Ethernet



The network connection is always present at the modality side. No special items have to be ordered.

### 2.5.3. Configuration

#### 2.5.3.1. Philips

For the configuration procedure of the EasyVision RAD refer to the release document.  
Configuration parameters per release:

- SBUS / PCI  
EasyVision RAD R4.2: **AGFA DRYSTAR 3000**
- Ethernet DICOM  
EasyVision RAD R4.2: **AGFA DRYSTAR 3000 DICOM**

#### 2.5.3.2. Agfa

The system and configuration software of the Drystar is already loaded before delivery.

### 2.5.4. Functional Description

The AGFA imager has the possibility for one dispenser in which the user can mount one magazine. During installation AGFA defines the film size. The customer is not able to change the film size. The AGFA imager has one film size and EasyVision RAD supports film type selection. However, since Agfa imagers do not report film type, images are only printed when the selected film type matches that available in the imager. If the types do not match, the image is accepted by the imager but stored on a hard disk in the imager.

#### Keypad control

There is no manual keypad control possible.

### 2.5.5. Service Notes

This section provides information on solving problems that may be encountered when configuring and/or operating this installation.

1. Symptom  
No film is printed.

#### Cause

The maximum density, sent by DICOM is not within the calibrated range of the film (DICOM warning 0x0116).

#### Remedy

Make sure that the maximum density sent by EasyVision is 3.00 OD. AGFA should set this DMAX value on 3.20 OD.

2. Symptom

The print job goes into ERROR on the keypad of the imager. On the engine display, the error FOI\_EFI\_DU can appear (derived error) and the engine will reset.

Cause

Not enough RAM memory for the pixel matrix on the imager (ICM problem).

Remedy

None. The job will never be printed.

Cause

Not enough workspace for NIP (nve NIPxxx11)

Remedy

Set the workspace to 245760 on the imager and the job will be printed.

3. Symptom

DICOM communication fails. EasyVision print queue remains unchanged.

Cause

Insufficient disk quota on the imager side.

Remedy

Pause the printer on the EasyVision user interface until a number of films are printed.

4. Symptom

Print job on opaque remains in the queue of the Drystar 3000.

Cause

EasyVision sends a print job with dbmax defaulted at 3.00 on opaque film type.

Remedy

Upload the opaque dispenser until the DICOM job is sent. The default dbmax (3.50) will be used. The film will be printed after inserting the dispenser in the imager.

5. Symptom

Auto configure on the EasyVision does not work.

Cause

EasyVision uses the DICOM node system name as AE title for the auto-configuring.

Remedy

Enter the AE title in the DICOM node system name field on the EasyVision and restart auto-configuring.

### 2.5.6. Tested Releases & Film Sizes

This section provides a history of all software releases relevant to this interface, together with points to watch out for when using a particular release.

#### Philips

EasyVision  
RAD

Release 4.2	:	Released for installation.
<i>Matrices used SBUS / PCI</i>	:	4256 * 5172 14 * 17"
		4256 * 4232 14 * 14"
		4256 * 3300 11 * 14"
		(Blue base and clear base) Grey 8
<i>Matrices used DICOM</i>	:	4256 * 5172 14 * 17"
		4256 * 4232 14 * 14"
		4256 * 3300 11 * 14"
		(Blue base and clear base) Grey 8 and Grey 12

#### AGFA

Drystar 3000  
SBUS / PCI:

MEGA3P31	:	Released for installation.
MEGA3P32	:	Released for installation.

Connectivity Release:	
MEGACON OEM33064	: Released for installation.
MEGACON OEM40646	: Tested July 99

DICOM:	MEGA3P32	:	Released for installation.
--------	----------	---	----------------------------

Connectivity Release:	
MEGACON OEM33064	: Released for installation.
MEGACON OEM40646	: Tested July 99

Imager SW	R. 1.73
-----------	---------

#### NOTE

*It is recommended to use the latest software release, which is available on the AGFA BBS.*

2.6. AGFA LR3300

2.6.1. Type of connection

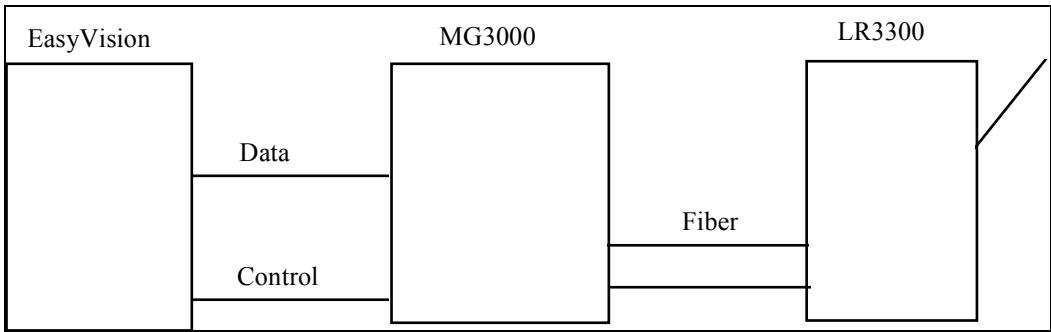
The AGFA connection possibilities are:

- SBUS / PCI, AMDI-C protocol (RS422, E, 1200, 8, 1)
- Network, DICOM

2.6.2. Ordering Information

2.6.2.1. SBUS / PCI

For a SBUS / PCI (point to point) connection the following can be ordered:



1. MG3 IF Kit Bravo 01 (see note)
- 3NMUR

NOTE

Since almost all interface kits with the MFRI board have the same ABC code, it is very important to specify which host system is involved at the time of ordering. This will ensure that all necessary parts will be delivered, including any adapter cables.

2. MG3 AMDI RS422 CBL
- 5m

15m

30m

60m

90m
- 3NJ2T

3NJ3V

3NJ4X

3NJ5Z

3NJ62
3. MG3 IMAGE CBL 37p
- 5m

15m

30m

60m

90m
- 3NJ98

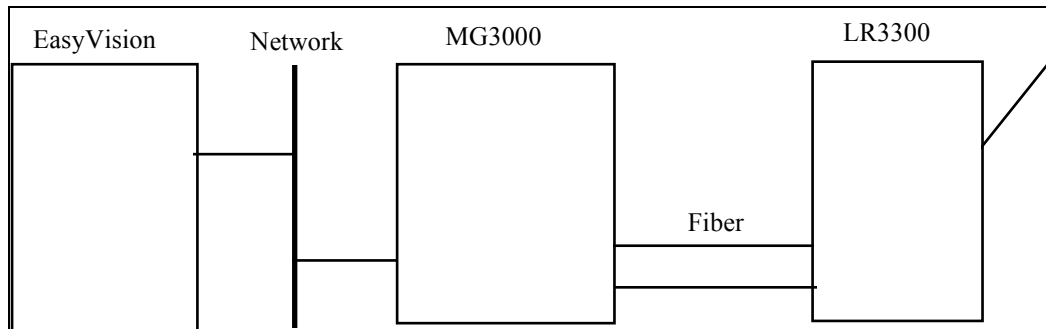
3NKAD

3NKBF

3NKCH

3NKDK

### 2.6.2.2. Ethernet



The network connection is always present at the modality side. No special items have to be ordered.

## 2.6.3. Configuration

### 2.6.3.1. Philips

For the configuration procedure of the EasyVision RAD refer to the release document.

Configuration parameters per release:

- SBUS / PCI  
EasyVision RAD R4.2: AGFA LR3300
- DICOM  
EasyVision RAD R4.2: AGFA LR3300 DICOM

### 2.6.3.2. AGFA

At the initial installation of an MG3000/LR3300, all interface boards specified at the time of ordering are normally already mounted and correctly configured.

The system and configuration software of the MG3000/LR3300 is already loaded before delivery.

#### NOTE

*The MG3000/LR3300 is delivered ready to 'plug and play". If any problems are encountered, please contact SI-DIS in Munich immediately, they will forward all relevant information to the Connectivity Group.*

## 2.6.4. Functional Description

The AGFA imager has the possibility for two dispensers in which different magazines (film sizes) can be mounted by the user. The controller is able to report the media size but cannot report the media type (blue base or clear base). EasyVision allows film type selection. However, since Agfa imagers do not report film type, images are only printed when the selected film type matches that available in the imager. If the types do not match, the image is accepted by the imager but stored on a hard disk in the imager.

#### Keypad control

There is no manual keypad control possible.

### 2.6.5. Service Notes

This section provides information on solving problems that may be encountered when configuring and/or operating this installation.

### 2.6.6. SBUS / PCI

#### 1. Symptom

Only one film sheet printed with an image artifact (saw along the vertical lines) and the printer is in a hang-up situation.

#### Cause

The next logging is created with the printer test tool:

```
<EOT><ACK><SOH>4,
<EOT><ACK><SOH>5,0,189
<EOT><ACK><SOH>120,0,
<EOT><ACK><SOH>121,0,4,3,2,1,4,246
<EOT><ACK><SOH>6,
<EOT><ACK><SOH>7,0,191
<EOT><ACK><SOH>4,
<EOT><ACK><SOH>5,0,189
<EOT><ACK><SOH>2,0,0,
<EOT><ACK><SOH>3,0,0,0,115
<EOT><ACK><SOH>120,0,
<EOT><ACK><SOH>121,0,4,3,2,1,4,246
<EOT><ACK><SOH>10,4,
<EOT><ACK><SOH>11,0,234
<EOT><ACK><SOH>14,4200,5100,10000,
<EOT><ACK><SOH>15,0,238
<EOT><ACK><SOH>16,0,
<EOT><ACK><SOH>17,0,240
<EOT><ACK><SOH>24,1,
<EOT><ACK><SOH>25,0,239
<EOT><ACK><SOH>18,0,
<EOT><ACK><SOH>19,5,247
<EOT><ACK><SOH>19,0,242
<EOT><ACK><SOH>100,0,
<EOT><ACK><SOH>101,5,031
<EOT><ACK><SOH>101,0,026
<EOT><ACK><SOH>6,
<EOT><ACK><SOH>6,
<EOT><ACK><SOH>6,
<EOT><ACK><SOH>6,
<EOT><ACK><SOH>2,0,0,
```

**No correct response !!!**

The printer does not give the correct logout response after a correct data transfer.

#### Remedy

Is introduced by Agfa with MEGA 3.32 and solved with R4.2. and onwards by increasing the timeout to 1 minute. If no R4.2 EasyVision the only solution is to swap the DAVID CPU board for a GEMINI CPU board which did solve the problem.

#### 2. Symptom

Only one film sheet printed and the printer is in a hang-up situation and displays on the keypad error B019.

#### Cause

Incorrect software loaded at the Agfa printer side.

#### Remedy

Agfa must install correct software.

3. Symptom

Film size 14\*14" not printed.

Cause

The matrix size is not correct implemented, landscape instead of portrait.

Remedy

Deselect the 14\*14" film format. Solved in release 4.2.

4. Symptom

Maximum density cannot be reached.

Cause

The MG3000 / LR3300 software release OEMMG016 which is loaded on the MG3000 selects default menu 1 up to 7. These menus are set for slides with a Dmax of 1.5. Host systems (V3000, DSI & EasyVision) select one of these menus; hence they are not able to reach a maximum density of 3.0.

Remedy

Ask AGFA to delete the default menus which are loaded on the C drive on the MG3000 and are \*.A00 files. AGFA service is informed via AGFA's own internal channels.

5. Symptom

No communication between MG3000 and the host system.

Cause

With all MFRI-1 boards, a specially adapted flat cable is required between the 15-pin connector on the MFRI board and the connector plate at the rear of the MG3000. This special flat cable (recognizable by a grey plastic connector cap) reverses the polarity of the hardware handshake lines. On MFRI-2 boards, the polarity of the hardware handshake has been corrected, removing the need for the special flat cable. A simple one-to-one flat cable is required.

Remedy

Ensure that the correct combination of MFRI board and flat cable is being used. Order codes for the MFRI cables are as follows:

MFRI-1	EB+44020370, cable label:	8.4402.2310.0
MFRI-2	EB+44020372, cable label:	8.4402.2710.0

**2.6.7. DICOM**1. Symptom

Film size 14\*14" not printed.

Cause

The matrix size is not correct implemented, landscape instead of portrait.

Remedy

Deselect the 14\*14" film format. Solved in release 4.2.

2. Symptom

No film is printed.

Cause

The maximum density, sent by DICOM is not within the calibrated range of the film (DICOM warning 0x0116).

Remedy

Make sure that the maximum density sent by EasyVision is 3.00 OD and Agfa must put the setting for the maximum OD to at least 3.20 OD.

3. Symptom

The print job goes into ERROR on the keypad of the imager. On the engine display, the error FOI\_EFI\_DU can appear (derived error) and the engine will reset.

Cause

Not enough RAM memory for the pixel matrix on the imager (ICM problem).

Remedy

None. The job will never be printed.

Cause

Not enough workspace for NIP (nve NIPxxx11)

Remedy

Set the workspace to 245760 on the imager and the job will be printed.

4. Symptom

DICOM communication fails. EasyVision print queue remains unchanged.

Cause

Insufficient disk quota on the imager side.

Remedy

Pause the printer on the EasyVision user interface until a number of films are printed.

5. Symptom

Print job on opaque remains in the queue of the LR3300.

Cause

EasyVision sends a print job with dbmax defaulted at 3.00 on opaque film type.

Remedy

Upload the opaque dispenser until the DICOM job is sent. The default dbmax (3.50) will be used. The film will be printed after inserting the dispenser in the imager.

6. Symptom

Auto configure on the EasyVision does not work.

Cause

EasyVision uses the DICOM node system name as AE title for the auto-configuring.

Remedy

Enter the AE title in the DICOM node system name filed on the EasyVision and restart auto-configuring.



### 2.6.8. Tested Releases & Film Sizes

This paragraph provides a history of all software releases relevant to this interface, together with points to watch out for when using a particular release.

#### Philips

EasyVision  
RAD

Release 4.2. : Released for installation.

*Matrices used SBUS / PCI* : 4256 \* 5172 14 \* 17"  
4256 \* 4232 14 \* 14"  
4256 \* 3300 11 \* 14"  
2996 \* 4192 10 \* 14"  
2368 \* 2972 8 \* 10"  
(Blue base, clear base and opaque) Grey 8

*Matrices used DICOM* : 4256 \* 5172 14 \* 17"  
4256 \* 4232 14 \* 14"  
4256 \* 3300 11 \* 14"  
2996 \* 4192 10 \* 14"  
2368 \* 2972 8 \* 10"  
(Blue base, clear base and opaque) Grey 8 and Grey 12

Release 4.2. : Released for installation.

*Matrices used SBUS / PCI* : 4256 \* 5172 14 \* 17"  
4256 \* 4232 14 \* 14"  
4256 \* 3300 11 \* 14"  
2368 \* 2972 8 \* 10"  
(Blue base, clear base and opaque) Grey 8

*Matrices used DICOM* : 4256 \* 5172 14 \* 17"  
4256 \* 4232 14 \* 14"  
4256 \* 3300 11 \* 14"  
2368 \* 2972 8 \* 10"  
(Blue base, clear base and opaque) Grey 8 and Grey 12

#### AGFA

MG3000

MEGA3P32 : Released for installation.

MEGACON OEM035276 : Released for installation.

#### NOTE

*It is recommended to use the latest software release, which is available on the AGFA BBS.*

---

## 2.7. AGFA MCL / MCL + MIN

### 2.7.1. Type of connection

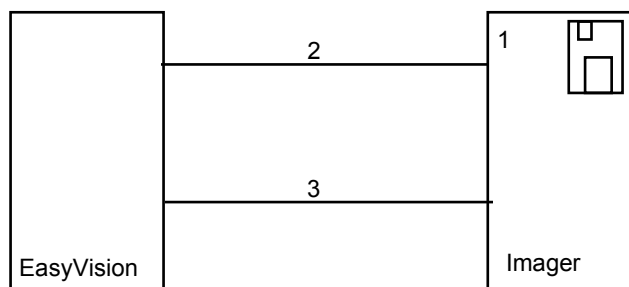
The AGFA connection possibilities are:

- SBUS / PCI, AMDI-C protocol (RS422, E, 1200, 8, 1)
- Ethernet, DICOM

### 2.7.2. Ordering Information

#### 2.7.2.1. SBUS / PCI

For a SBUS / PCI (point to point) connection the following can be ordered:



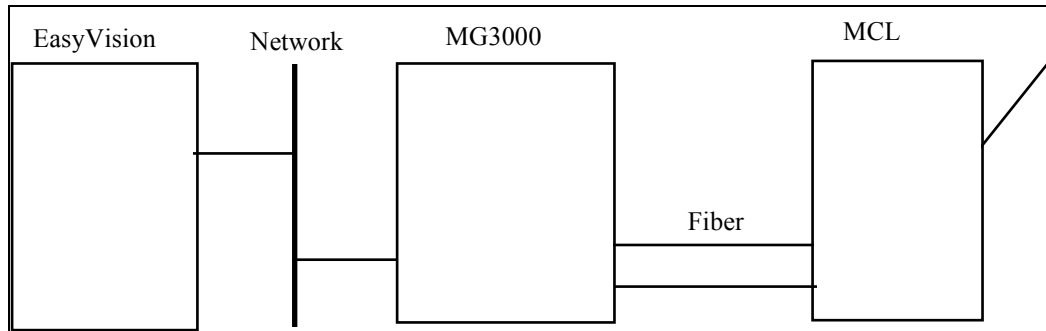
1.	AMDI RS422 MODULE	22S4X
2.	AMDI-C RS422 CONTROL CABLE	
	5m	FYTN6
	15m	FYTKZ
	30m	FYTJX
	60m	FYTFR
	90m	FYTEP
	CONTROL ADAPTOR CABLE	FNAVA1
3.	IMAGE DATA CABLE	
	5m	FS2NP
	15m	FS3MN
	30m	FS2JG
	60m	FS2HE
	90m	FS2E7

**Note:**

- DIMG INP IF MULTIFORM (MFRI board, minimum Revision D) 3ETM6
- 40mbyte RAM extra in MIN (exactly 48mbyte RAM is required).
  - 8 MByte RAM BOARD 22SNY
  - 16 MByte RAM BOARD M3DYW
  - 32 MByte RAM BOARD 3FKLA

**DO NOT USE AGFA-MATRIX 16MBYTE BOARDS in the MIN !!!!!!!!!!!**

### 2.7.2.2. Ethernet



The network connection is always present at the modality side. No special items have to be ordered.

### 2.7.3. Configuration

This paragraph describes which parameters must be configured.

#### 2.7.3.1. Philips

For the configuration procedure of the EasyVision RAD refer to the release document.  
Configuration parameters per release:

- SBUS / PCI  
EasyVision RAD R4.2: AGFA MCL Bitmap or AGFA MCL(plusMIN)
- DICOM  
EasyVision RAD R4.2: AGFA MCL Bitmap

#### 2.7.3.2. AGFA

1. The MIN/MCL must first be installed as a stand alone system, in accordance with the service documentation.
2. Adjust the Menu/Source Parameters accordingly.
3. Adjust the parity jumper on the MFRI board to Even.
4. In the Novtab, the time out for the input image must be increased to 10 Minutes ( Offset 7 changed to E6AO).
5. Connect the image and the data cable.
6. Set the maximum film size (MIS) in the MIN.

#### NOTE

*The EasyVision can only be connected to an MFRI board and not to an MIR board, because of the limited line size.*

*If the EasyVision is connected to an MCL via MIR, the Novtab offset D (Copy to buffer size) must be increased from 1000 Hex to 1100 Hex in the MCL.*

### 2.7.4. Functional Description

The AGFA imager has the possibility for two dispensers in which different magazines (film sizes) can be mounted by the user.

#### Keypad control

There is no manual keypad control possible.

### 2.7.5. Service Notes

This section provides information on solving problems that may be encountered when configuring and/or operating this installation.

#### 1. Symptom

Other host systems are not able to print.

#### Cause

The EasyVision images sent are very large, they cause annoyingly long lock out times for other MIN users. For situations in which multiple inputs need to be connected via MIN to an MCL, this is a problem. Users operating exclusively in background remote control with AMDI-C are not affected by this situation.

#### Remedy

It is recommended to use an extra MIN, exclusively for EasyVision, and to cross-link this with other MINs.

### 2.7.6. Tested Releases & Film Sizes

This paragraph provides a history of all software releases relevant to this interface, together with points to watch out for when using a particular release.

#### **Philips**

EasyVision RAD

Release 4.2 : Released for installation.

*Matrices used SBUS / PCI* : 4256 \* 5172 14 \* 17"  
4256 \* 4232 14 \* 14"  
4256 \* 3300 11 \* 14"  
2368 \* 2968 8 \* 10"  
Grey 8  
And for the MCL(plusMIN)  
(clear base 8 \* 10) Grey 8

*Matrices used DICOM* : 4256 \* 5172 14 \* 17"  
4256 \* 4232 14 \* 14"  
4256 \* 3300 11 \* 14"  
2368 \* 2968 8 \* 10"  
Grey 8

#### **AGFA**

MCL / MIN

MIN MIN0214/SIMC4903 : Released for installation.

MCL MCL01414/LIR3870 : Released for installation.



3. Connectivity CODONICS Imagers

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### 3.1. INTRODUCTION

This section describes various aspects of the connection / interfacing of a Philips EasyVision RAD to Codonics laser imagers. For the installation and configuration procedures refer to the corresponding service and release manuals. This document contains information for service engineers (Philips & Codonics) to verify if the set-up is identical to that tested and released by the PMG.

### 3.2. CODONICS EP1600

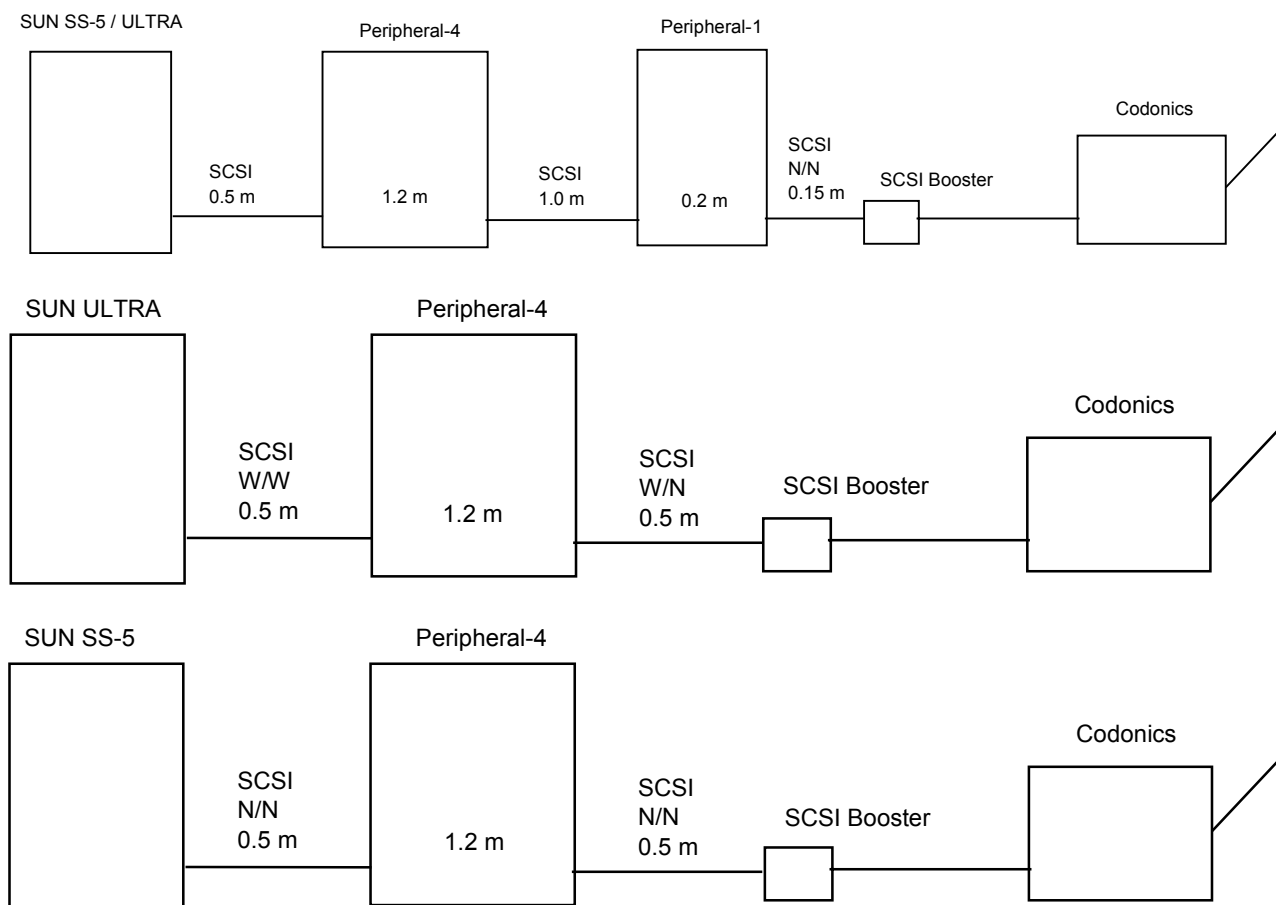
#### 3.2.1. Type of Connection

The connection possibilities are:

- SCSI

The Codonics EP1600 is able to print in black & white or in color. The paper is equal for black & white and color. When using a color ribbon both black & white and color images may be printed. When using a black & white ribbon only black & white printing is possible and the printer may hang the entire system if color images are sent. Printing on transparencies is also possible.

#### 3.2.2. Ordering Information



The EP1600 is delivered via Philips channels. All required interface cables are shipped with the unit.

The SCSI interface maximum distance is 3 meters from the SUN Sparcstation upto the SCSI booster. The additional distance is achieved with a SCSI booster, which is part of the delivery.  
For SCSI booster parts and cables to order refer to section EasyVision RAD 4.X connectivity chapter: SCSI connection.

#### NOTE

*A reflection densitometer is required for the density calibration, e.g., Xrite 400.*

---

### 3.2.3. Configuration

This section describes which parameters must be configured by the different parties. During configuration both Philips and CODONICS service engineers must be present.

#### 3.2.3.1. Philips

For the configuration procedure of the EasyVision RAD refer to the release document.  
Configuration parameters per release:

- SCSI  
EasyVision RAD R4.X: CODONICS EP1600

#### 3.2.3.2. Codonics EP1600

##### Settings:

SCSI interface address R4.X is depending on the SUN hardware. The correct settings are in the system manual-section programming for the correct SCSI address.

SCSI-ID: 4

### 3.2.4. Functional Description

It is strongly recommended to use paper with a monochrome ribbon. Tests have indicated that transparency films have coating problems. It is possible to print black & white with a color ribbon, but the throughput is only a third of that reached with a monochrome ribbon.

The Codonics imager is not able to report the film size.

### 3.2.5. Service Notes

This section provides information on solving problems that may be encountered when configuring and/or operating this installation.

#### 4. Symptom

Film is not printed and message CHECK RIBBON.

#### Cause

New media GEN 1.5 introduced by CODONICS which is not supported.

#### Remedy

Call Helpdesk EVM and ask for the new LED circuit board upgrade kit.



3.2.6. Tested Releases & Film Sizes

This section provides a history of all software releases relevant to this interface, together with points to watch out for when using a particular release.

Philips

EasyVision RAD

Release 4.X	: Released for installation.
<i>Matrices used</i>	: 2400 * 2888 A ( 8.5 * 11") 2400 * 2680 ( 8.5 * 9") 2400 * 3000 ( 8.5 * 11.5") 2544 * 3000 ( 9 * 11.5") (Clear base and opaque) Grey 8 and RGB-BI

Codonics

EP1600

EP1600 v0.0016	: Released for installation.
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## 4. Connectivity FUJI Imagers

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## 4.1. INTRODUCTION

This section describes various aspects of the connection / interfacing of a Philips EasyVision RAD to Fuji laser imagers. For the installation and configuration procedures refer to the corresponding service and release manuals. This document contains information for service engineers (Philips & Fuji) to verify if the set-up is identical to that tested and released by the PMG.

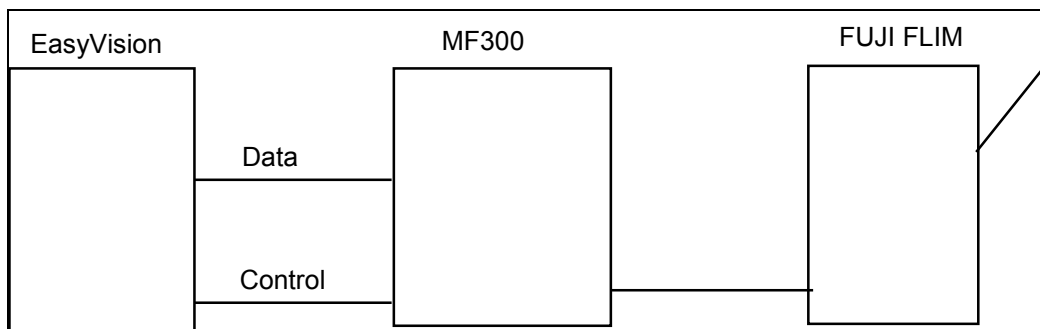
## 4.2. FUJI - IM 2626/3535/3543

### 4.2.1. Type of Connection

The connection possibilities are:

- PCI/Sbus, 952 protocol (RS422, E, 1200, 8, 1)

### 4.2.2. Ordering Information



Ordering information T.b.s.

### 4.2.3. Configuration

This section describes which parameters must be configured by the different parties. During configuration both Philips and Fuji service engineers must be present.

#### 4.2.3.1. Philips

For the configuration procedure of the EasyVision RAD work station refer to the release document. Configuration parameters per release:

- PCI/Sbus  
EasyVision RAD R4.2: Fuji FL-IM3543  
EasyVision RAD R4.2: Fuji FL-IM3525  
EasyVision RAD R4.2: Fuji FL-IM2636

#### 4.2.3.2. Fuji

1. 20 MByte input module is required
2. MF300
3. Configuration:

##### Software settings:

1-2-2	Host communication:	Protocol Type 0603 (952)
	Speed	1200
	Data bit	8
	Parity	Even
	Stop bits	1

##### Hardware settings:

Baud rate select switch (S6-1~4) : 1.2.3= Off, 4 = On  
 RS232/RS422 select switch (S8.S6-6) : S6-6 = 0n, S8:1-4 = On, 5-8 = Off  
 Image data parity switch (S7-1~2) : 1,2 = Off  
 Rotary switch for image request data transfer request signal width setting: T1=5, T2=2, T3=3

##### Action switch:

Auto print	: 2, Disable
Over write	: 2, Disable
Image clear type	: 1, By command (M952)
LP not ready message	: 2, No display
Reprint function	: 2, Disable

##### Caution:

1. Set the image transmission time-out to 600 mSec.
2. Rename FMTUSER.EV to FMTUSER.PRM and recreate the card.

The above settings need not be done when the flash memory has been modified to support EasyVision RAD.

#### 4.2.4. Functional Description

Although the Fuji imager can handle different film sizes, the selection cannot be done by the user. The change to an other film size needs a service action.

The latest imager software (Release XXXXX?????XXXXX and later) supports media size selection.

##### Keypad control

There is no manual keypad control possible.

#### 4.2.5. Service Notes

This section provides information on solving problems that may be encountered when configuring and/or operating this installation.

1. Symptom

EasyVision RAD reports media low, the imager reports a memory full condition.

Cause

The imager accepts data if the film supply is empty. The data is accepted until the memory is full. Restoring the media does however not restore the imager to a normal condition.

Remedy

Press the confirm button on the keypad of the imager.

2. Symptom

EasyVision RAD reports an error after one successful print.

Cause

The imager is not configured correctly. Depending on the protocol (3M 831 or 953) the configuration for the Action Switch Image Clear Type parameter must be set differently.

Remedy

Set the Fuji imager, Image Clear Type parameter to: 1; by command (M952).

3. Symptom

EasyVision RAD status message: Attention needed.

Cause

Fuji FL-IM-D formatter keypad is not programmed according to the EasyVision RAD. One film is printed and then the FL-IM-D will lock. Rebooting the EasyVision RAD will not correct the problem.

Remedy

The Fuji keypad needs to be default on 1 to 1.

4.2.6. Tested Releases & Film Sizes

This section provides a history of all software releases relevant to this interface, together with points to watch out for when using a particular release.

Philips

EasyVision RAD

Release 4.2	: Released for installation.
<i>Matrices used</i>	: 3600 * 2536 2636 * 11" * 14" 3448 * 3520 3535 * 14" * 14" 3520 * 4248 3543 * 14" * 17" Grey 8

Fuji

FL-IM-D

MF unit	: 114Y5410002 A05 114Y5410002 A08
Auto filming unit	: 114Y5410927 A02 : Released for installation.

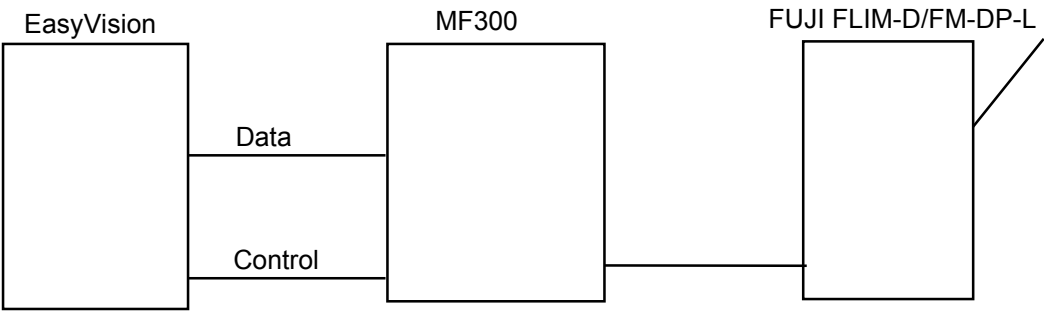
4.3. FUJI FLIM - D / FM-DP-L Dry

4.3.1. Type of Connection

The connection possibilities are:

- PCI/Sbus, 952 ext. protocol (RS422, E, 1200, 8, 1)

4.3.2. Ordering Information



Ordering information T.b.s.

Cables:

- |    |                    |                        |
|----|--------------------|------------------------|
| 1. | Host control cable | MF300 RCBL 422 25P-37p |
| 2. | Imaging cable      | MF300 D/HOST CABLE **E |

### 4.3.3. Configuration

This section describes which parameters must be configured by the different parties. During the configuration both Philips and Fuji service engineers must be present.

#### 4.3.3.1. Philips

For the configuration procedure of the EasyVision RAD work station refer to the release document:

- PCI  
EasyVision RAD R4.X: Fuji FLIM-D / FM-DP-L

#### 4.3.3.2. Fuji

**MF300 Software settings** (Control): (Service Mode on MF300, for 'ch' select 1=DPI)

<b>input module</b>	min memory	20 MByte
	Formats	1:1
	Interpolation	smooth
	Contrast	#1
<b>input channel</b>	board type	DPI refer to pixel size
	pixel	3520 for 35 * 43
	line	4248 for 35 * 43
	width	0001
	height	0001
<b>Host communication:</b>	Protocol Type	0603 (952)
	Speed	1200
	Data bit	8
	Stop bits	1
	Parity	Even
	Format selection	HP02 [12] HP06 [14]
<b>Action switch</b>	Auto / Manual	AUTO
	Autoprint	2, DISABLE
	Overwrite	2, DISABLE
	Image clear type	1, BY COMMAND (M952)
	Reprint function	2, DISABLE
	LP not ready message	2, NO DISPLAY
	DSP magnification	(2) 3: <=1/1
	Storing timeout	acquisition timeout: 300 transfer timeout 300
	charter location-2	not display
	charter print type	
	frame interval	upper interval =00 lower interval =00 right interval =00 left interval =00 frame interval =00

**Hardware settings** (image data transfer):

Baud rate select switch	(S6-1~4)	1.2.3= Off, 4 = On (--> 1200 Baud)
RS232/RS422 select switch	(S8.S6-6)	S6-6 = OFF, S8:1-4 = OFF, 5-8 = ON (RS422)
Image data parity switch	(S7-1~2)	1,2 = Off
Image parity		ODD
image data transfer request setting	Rotary switch	: T1=3, T2=5, T3=4

for image data transfer request signal width setting: T1=5, T2=2, T3=3

**Caution:**

1. Set the image transmission time-out to 600 mSec. (Storing Time Out)
2. Rename FMTUSER.EV to FMTUSER.PRM and recreate the card.

The above settings need not be done when the flash memory has been modified to support EasyVision RAD.

**4.3.4. Functional Description**

The Fuji FL-IM-D supports film size selection, Fuji software version XXXX????XXXX and later.

Keypad control

There is no manual keypad control possible.

**4.3.5. Service Notes**

This section provides information on solving problems that may be encountered when configuring and/or operating this installation.

**1. Symptom**

EasyVision RAD reports media low, the imager reports a memory full condition.

Cause

The imager accepts data if the film supply is empty. The data is accepted until the memory is full. Restoring the media does however not restore the imager to a normal condition.

Remedy

Press the confirm button on the keypad of the imager.

**2. Symptom**

EasyVision RAD reports an error after one successful print.

Cause

The imager is not configured correctly. Depending on the protocol (3M 831 or 952) the configuration for the Action Switch Image Clear Type parameter must be set differently.

Remedy

Set the Fuji imager, Image Clear Type parameter to: 1; by command (M952).

**3. Symptom**

EasyVision RAD status message: Attention needed.

Cause

Fuji FL-IM-D formatter keypad is not programmed according to the EasyVision RAD. One film is printed and then the FL-IM-D locks. Rebooting the EasyVision RAD doesn't correct the problem.

Remedy

The Fuji keypad needs to be default on 1 to 1.



4.3.6. Tested Releases & Film Sizes

This section provides a history of all software releases relevant to this interface, together with points to watch out for when using a particular release.

Philips

EasyVision  
RAD

Release 4.X	: Released for installation.
<i>Matrices used</i>	: 3600 * 2536    11 * 14"
	3480 * 3520    14 * 14"
	3520 * 4248    14 * 17"
	Grey 8

Fuji

FL-IM

MF300 unit	114Y5410802 A11
MF300 CPU 90A ROM	C-03
MF300 oper. panel SW	114Y5410814 A06
MF300 Host control SW	114Y5410926 A11
	.

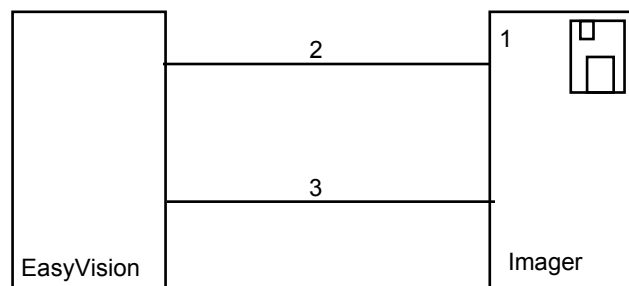
## 4.4. FUJI FM-DP3543 Dry

### 4.4.1. Type of Connection

The connection possibilities are:

- PCI/Sbus, 952 ext. protocol (RS422, E, 1200, 8, 1)

### 4.4.2. Ordering Information



Ordering information T.b.s.

### 4.4.3. Configuration

This section describes which parameters must be configured by the different parties. During configuration both Philips and Fuji service engineers must be present.

#### 4.4.3.1. Philips

For the configuration procedure of the EasyVision RAD work station refer to the release document.

Configuration parameters per release:

- Sbus/PCI  
EasyVision RAD R4.X: Fuji FL-DP3543

#### 4.4.3.2. Fuji

1. 20 Mbytes input module is required
2. MF300
3. Configuration:

##### Software settings:

1-2-2	Host communication:	Protocol Type 0603 (952)
	Speed	1200
	Data bit	8
	Parity	Even
	Stop bits	1

##### Hardware settings:

Baud rate select switch	(S6-1~4)	: 1,2,3= Off, 4 = On
RS232/RS422 select switch	(S8.S6-6)	: S6-6 = On, S8:1-4 = On, 5-8 = Off
Image data parity switch	(S7-1~2)	: 1,2 = Off

Rotary switch for image request data transfer request signal width setting: T1=5, T2=2, T3=3

##### Action switch:

Auto print	: 2, Disable
Over write	: 2, Disable
Image clear type	: 1, By command (M952)
LP not ready message	: 2, No display
Reprint function	: 2, Disable

##### Caution:

1. Set the image transmission time-out to 600 mSec.
2. Rename FMTUSER.EV to FMTUSER.PRM and recreate the card.

The above settings need not be done when the flash memory has been modified to support EasyVision RAD.

#### 4.4.4. Functional Description

The Fuji FLIM-D3543 supports film size selection.

##### Keypad control

There is no manual keypad control possible.

#### 4.4.5. Service Notes

This section provides information on solving problems that may be encountered when configuring and/or operating this installation.

#### 4.4.6. Tested Releases & Film Sizes

This section provides a history of all software releases relevant to this interface, together with points to watch out for when using a particular release.

##### Philips

EasyVision RAD

Release 4.2.V2Lx : Released for installation.

*Matrices used* : 4080 \* 4984 14 \* 17"  
Grey 8

##### Fuji

FILM-D 3543

C01 main body software and  
A04 host control software and  
A03 Panel software : Released for installation.

## 4.5. DICOM

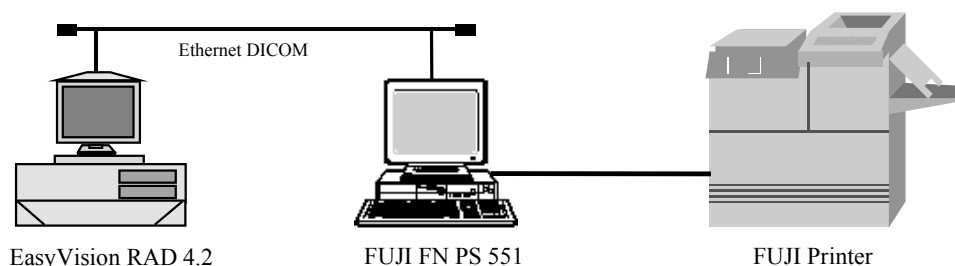
### 4.5.1. Type of Connection

- **DICOM, Ethernet**  
For DICOM the FN-PS551 is used

### 4.5.2. Ordering Information

T.b.s.

### 4.5.3. Configuration



#### 4.5.3.1. Philips

For the configuration procedure of the EasyVision RAD work station refer to the release document.

In the **configuration editor** select :

- 'interface type': - **DICOM**
- 'Printer type': - **FUJI FL-IM D,**  
- **FUJI FM-DP L,**  
- **FUJI FM-DP3543-DICOM**
- A maximum of two printers can be connected to a FN PS 551

In the **DICOM node configuration** panel fill in the entries:

- **IP node name, IP address, DICOM node system name** as requested by the installation of the customer.
- Port number **104**
- AE-Title **Printer1** (or respectively)
- SCP settings **Print as SCP**

#### 4.5.3.2. Fuji DICOM Print Server 551 (FN PS 551)

Tested software release: **A06**

- Service Utility (before the Service Utility can be started the Application must be stopped)

Protocols	DICOM	properties	network port no.	:	104
			timeout data transfer	:	600 sec
			print Server entity	:	one to each printer
Printer	printer1: properties	Name	name (AE Title of DICOM):	:	Printer1
		interface	interface	:	E-i/f
			pixel clock	:	1.0 µsec/pixel
			version	:	type1⇒FM-DP3543/2636
					type2⇒FLIM-D, FM-DP L

Clients	network client property	<b>name</b>	Hostname : EV1
			IP address (EV1) : 192.168.100.34 (example)
		<b>protocol</b>	protocol : DICOM AET : Printer1
			Attribute list error : not indicate
			Attribute value out of range: indicate image size > than image box indicate N-Event-Report RQ : enabled use extension format : Yes Default Annotation : No ID : EV
		<b>magnify</b>	procedure : SSM Default smoothing type : SHARP
		<b>LUT</b>	procedure : SAR Default LUT : 1 adjustment parameter : LUT 1 table no. : 19 contrast : 100 max. density : 300 min. density : 20 number of tuning points : 0
		<b>printer</b>	fixed, prim./second, random : fixed primary printer : Printer1
		<b>output format</b>	<i>refer to screenshot below</i>

### Output format

**Network Client Property**

**output format**

border density : 300

polarity(Pos./Neg.) : ☒ normal(Pos.) ☐ reverse(Neg.)

trim density : 0

trim : ☐ ON ☒ OFF

trim width : 1 pixel

number of copies : 1

film size : ☒ 14 x17 (inch) ☐ 14 x14 (inch)  
☐ 11 x14 (inch) ☐ 8 x10 (inch)

medium type(base color) : ☒ blue ☐ clear

film orientation : ☒ PORTRAIT ☐ LANDSCAPE

mirror : ☐ ON(Mirror) ☒ OFF(Normal)

Overlay threshold density : 120

OK Cancel

- **Printer** Two different printers each connected to one of two SCSI interfaces of the DICOM print server computer (FN PS 551) can be configured.
- For each of the two printers a different AE-title must be entered. The EasyVision RAD uses this AE-title to make connection with the DICOM server and to select the printer.



## 5. Connectivity IMATION Imagers

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## 5.1. INTRODUCTION

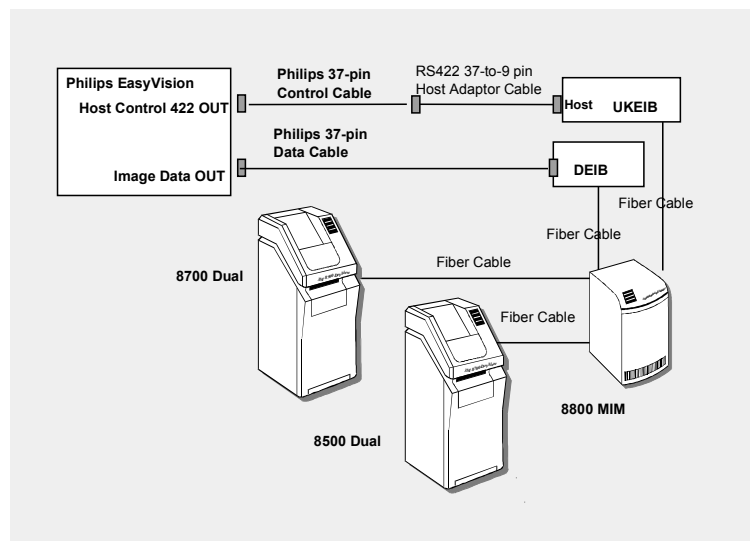
This section describes various aspects of the connection / interfacing of a Philips EasyVision RAD R4.X to Imation 3M laser imagers. For the installation and configuration procedures refer to the corresponding service and release manuals. This document contains information for service engineers (Philips & Imation) to verify if the set-up is identical to that tested and released by the PMG.

## 5.2. Kodak/Imation MIM 8800 / 8500 /8700 Dual

### 5.2.1. Type of Connection

The connection possibilities are:

- SBus/PCI, 952 extended and SuperSet protocol (RS422, E, 1200, 8, 1)



### NOTE

**This applies to any 3M type point to point imager connection:**

*When the control cable and data cable connectors are interchanged, the S-BUS/PCI interface board in the EasyVision RAD may be destroyed.*

### 5.2.2. Configuration

This paragraph describes which parameters must be configured by the different parties. During the configuration both Philips and Imation service engineers must be present.

#### 5.2.2.1. Philips

For the configuration procedure of the EasyVision RAD Rel. 4.x refer to the release document. Configuration parameters per release:

- Interface type: SBus/PCI  
Printer type: 3M MIM  
3M MIMSuperset  
Interface=PCI/SBus, Printer= 3M MIM, Name=dv8800

#### 5.2.2.2. Imation

##### NOTE

*Image, system and host parameter screens remain the same for all configurations. The communication screens are different for the host control and the keypad. When using host control and keypad, remember to configure as two different inputs (comm 0 and comm 1).*

---

- COMM Menu: 959 Default  
1200 Baud, Parity: enable, Even, 8 Bits, 1Stop Bit
- IMAGE Menu: TFT=PMSV3K, Dmax=3.00, Contrast=9, Density=14
- HOST: Pixel Correct=No, Scale Format=No, Scale Magnif.=No, Slides=Super
- Digital EIB Menu: Pixel Width=8, Header/Line, Parity=Enable Odd, Timeout=255

##### NOTE

*Substitute pixels per line and image lines by the data contained under "Release Notes & Film Sizes" in this chapter.*

---

### 5.2.3. Functional Description

The Imation Kodak/Imation MIM 8800 has the possibility to connect two different Imation imagers to one EasyVision RAD output. Depending on the connected Imation imager certain filmsizes are available. There are two major differences if certain imagers are connected to the MIM 8800:

1. Imagers with different film sizes  
Possibilities are:  
3M 8300 and 3M 8500  
3M 8500 and 3M 8700  
3M 8300 and 3M 8700

In this case the EasyVision RAD treats the combination as one DryView imager with 2 film sizes. Only one imager should be configured: 3M MIM or 3M MIM Superset

**2. Imagers with equal film sizes**

Possibilities are:

Kodak/Imation HQ and 3M 8300

Kodak/Imation HQ and 3M 8500

Kodak/Imation HQ and 3M 8700

3M 8700 and 3M 8700

3M 8500 and 3M 8500

3M 8300 and 3M 8300

In cases like the above mentioned the EasyVision RAD is **not** able to differentiate on film size selection between the imagers. So, configuring both imagers the option shared interface must be switched on. (Refer to the Release Bulletin sect.: Configuration)

**Keypad control**

There is no manual keypad control possible.

**5.2.4. Service Notes**

This paragraph provides information on solving problems that may be encountered when configuring and/or operating this installation.

**1. Symptom**  
?**Cause**

EasyVision RAD sends 1:1 film only. No image interpolation is allowed.

**Remedy**

Switch the image interpolation off.

**2. Symptom**

The imager reprints the same sheet several times.

**Cause**

EasyVision RAD receives an error message from the printer. EasyVision RAD asks for a reprint, but the printer has already printed the copy.

**Remedy**

Set the image time-out parameter to 300.

### 5.2.5. Tested Releases & Film Sizes

This paragraph provides a history of all software releases relevant to this interface, together with points to watch out for when using a particular release.

#### Philips

EasyVision RAD

Release R4.X	: Released for installation
<i>Matrices used 952</i>	: 4096 * 5216 14*17" 3384 * 4272 11*14" 2256 * 2676 8*10" Grey 8
<i>Matrices used SuperSet</i>	: 4096 * 5216 14*17" 3384 * 4272 11*14" 2256 * 2676 8*10" (Clear and blue base) Grey 8

#### Imation

Imation Kodak/Imation MIM 8800

Release IMS	: 4.7C Released for installation : 4.7E Released for installation : 5.0 Released for installation
-------------	---

### 5.3. Kodak/Imation DRY VIEW 8700 Plus

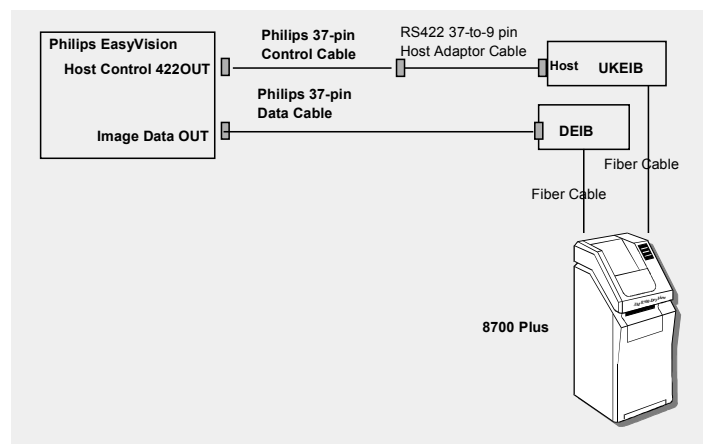
#### 5.3.1. Type of Connection

The connection possibilities are:

- SBus/PCI, 952 ext. and SuperSet protocol (RS422, E, 1200, 8, 1)

#### 5.3.2. Configuration

This paragraph describes which parameters must be configured by the different parties. During configuration both Philips and Imation service engineers must be present.



##### 5.3.2.1. Philips

For the configuration procedure of the EasyVision RAD refer to the release document.  
Configuration parameters per release:

■ **Interface type: SBus/PCI**

Printer type: EasyVision RAD R4.X : 3M 8700

EasyVision RAD R4.X : 3M 8700 SUPERSET

set Interface=PCI/SBus, Printer= 3M 8700, Name=dv8700

Config. Media List: 14x17 G8=On (8-bit-print), 14x17 G12=Off (12-bit-print)

##### 5.3.2.2. Imation

#### NOTE

*Image, system and host parameter screens remain the same for all configurations.*

#### 8700 Plus Setup:

- COMM Menu: 969 Default (Superset); Baud=19200; Parity disable; Bits=8; Stop Bits=1;
- IMAGE Menu: TFT=PMSV3K, Dmax=3.00, Contrast=9, Density=14
- HOST Menu: Pixel Correction= No, Scale Format= No, Scale Magnif.= No
- SYSTEM Menu: Memory Management=Best Fit
- Digital EIB parameters: Header/Line; Timeout=300; T6=200, T7=255, T10=255; Prescale=ON; Pixel=8;

**NOTE**

*Substitute pixels per line and image lines by the data contained under "Release Notes & Film Sizes" in this chapter.*

---

**5.3.3. Functional Description**

The Imation Kodak/Imation 8700 Dry View imager has one dispenser in which one film size and different media types can be loaded by the user.

Keypad control

There is no manual keypad control possible.

**5.3.4. Service Notes**

This paragraph provides information on solving problems that may be encountered when configuring and/or operating this installation.

**5.3.4.1. SBus/PCI**1. Symptom

EasyVision RAD hang-up.

Cause

An image has been sent to the Imation Kodak/Imation 8700 imager immediately after switching the Imation Kodak/Imation 8700 imager on.

Remedy

Wait 1 minute before you switch on the EasyVision RAD.

2. Symptom

?

Cause

EasyVision RAD sends 1:1 film only. No image interpolation is allowed.

Remedy

Switch the image interpolation off.

3. Symptom

The imager reprints the same sheet several times.

Cause

EasyVision RAD receives an error message from the printer. EasyVision RAD asks for a reprint, but the printer has already printed the copy.

Remedy

Set the image time-out parameter to 300.

### 5.3.5. Tested Releases & Film Sizes

This paragraph provides a history of all software releases relevant to this interface, together with points to watch out for when using a particular release.

#### Philips

##### EasyVision RAD

Release R4.X : Released for installation

##### SBus/PCI

*Matrices used 952* : 4096 \* 5216 14\*17"  
Grey 8 / 12

*Matrices used SuperSet* : 4096 \* 5216 14\*17"  
(Clear and blue base) Grey 8 / 12

##### DICOM

Release R4.X. : Released for installation  
*Matrices used DICOM* : 4096 \* 5216 14\*17"  
(Clear and blue base) Grey 8 / 12

#### Imation

##### Imation Kodak/Imation8700 DRYVIEW

Release V1.15 : Released for installation.  
Release V1.20 : Released for installation.  
Release V1.22 : Released for installation

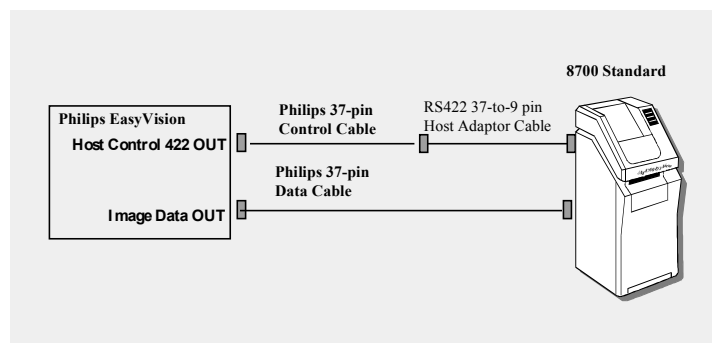


## 5.4. Kodak/Imation 8500 / 8700 Standard

### 5.4.1. Type of Connection

- sBus/PCI, Point to point

### 5.4.2. Configuration



#### 5.4.2.1. Philips

- EasyVision RAD 4.x:
  - sBus/PCI, 3M 8700 / 3M 8700 Superset
  - Interface type=PCI/SBus, Printer= 3M 8700, Name=dv8700
  - Config. Media List: 14x17 G8=On (8-bit-print), 14x17 G12=Off (12-bit-print)

#### 5.4.2.2. Kodak/Imation

##### 8700 Standard Setup:

- TDB/C board: Jumpers=RS422, Switch=Center
- COMM Menu: 959 Default
- IMAGE Menu: TFT=PMSV3K, Dmax=3.00, Contrast=9, Density=14
- HOST Menu: Pixel Correction= No, Scale Format= No, Scale Magnification= No
- SYSTEM Menu: Memory Management=Best Fit
- EIB Menu: Pixel=8, Header/Line, Parity=Enable Odd, Timeout=255

### 5.4.3. Tested Releases & Film Sizes

**Requirements:** EasyVision 4.2 or EasyRAD 2.3, 8700 Standard rel. 1.15

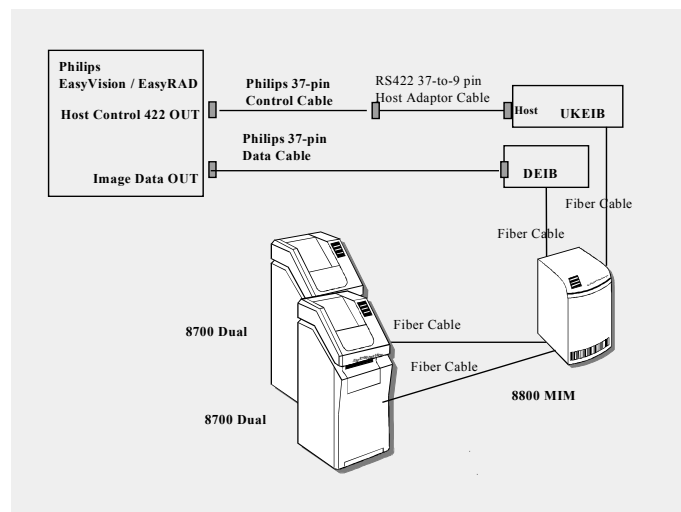
## 5.5. Kodak/Imation MIM 8800 with 2 DryView 8700 Dual

### ■ Independent printing with two identical Imagers

#### 5.5.1. Type of Connection

- PCI, 959 default

#### 5.5.2. Configuration



##### 5.5.2.1. Philips

###### ■ DV8700-1

Interface type=PCI/SBus, Printer type= 3M 8700, Name=dv8700nbr1

Config. Media List: 14x17 G8=On (8-bit-print), 14x17 G12=Off (12-bit-print)

Advanced Printer Properties: Shared Interface=On, Dest. Nbr=0

###### ■ DV8700-2      Peripherals settings, Printer = New

Interface type=PCI/SBus, Printer type= 3M 8700, Name=dv8700nbr2

Config. Media List: 14x17 G8=On (8-bit-print), 14x17 G12=Off (12-bit-print)

Advanced Printer Properties: Shared Interface=On, Dest. Nbr=1

##### 5.5.2.2. Kodak/Imation

###### ■ 880/8700 Dual Setup

COMM Menu: 959 Default

IMAGE Menu: TFT=PMSV3K, Dmax=3.00, Contrast=9, Density=14

HOST: Pixel Correct=No, Scale Format=No, Scale Magnif.=No, Slides=Super

EIB Menu: Pixel=8, Header/Line, Parity=Enable Odd, Timeout=255

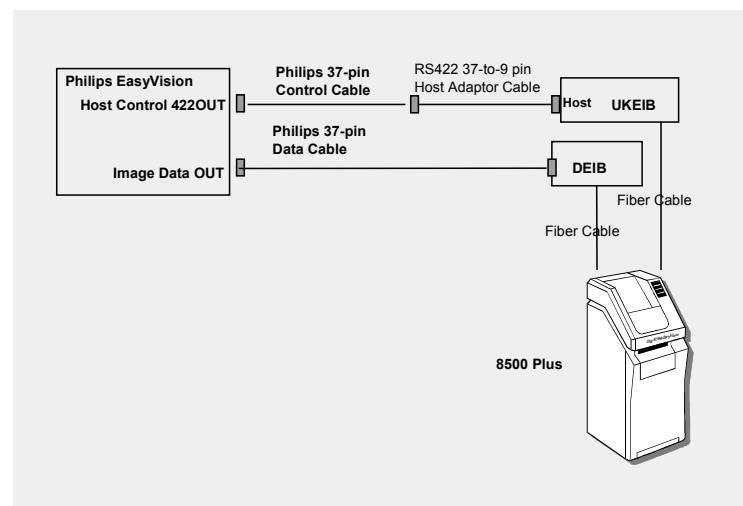
## 5.6. Kodak/Imation DryView 8500 Plus

### 5.6.1. Type of Connection

The connection possibilities are:

- SBus/PCI, 952 ext. or SuperSet protocol (RS422, E, 1200, 8, 1)

### 5.6.2. Configuration



#### 5.6.2.1. Philips

For the configuration procedure of the EasyVision RAD work station refer to the release document.

Configuration parameters per release:

- SBus/PCI
  - EasyVision RAD R4.X: Kodak/Imation8500
  - EasyVision RAD R4.X: Kodak/Imation8500 SUPERSET

#### 5.6.2.2. Kodak/Imation

#### NOTE

*Image, system and host parameters **except the film size** remain the same for all configurations. The communication screens are different for the host control and the keypad. When using host control and keypad, remember to configure as two different inputs (comm 0 and comm 1).*

#### 8700 Plus Setup:

- COMM Menu: 959 Default
- IMAGE Menu: TFT=PMSV3K, Dmax=3.00, Contrast=9, Density=14
- HOST Menu: Pixel Correction= No, Scale Format= No, Scale Magnification= No
- SYSTEM Menu: Media size: 11x14"; Memory Management=Best Fit
- EIB Menu: Pixel=8, Header/Line, Parity=Enable Odd, Timeout=255

**NOTE**

*Substitute pixels per line and image lines by the data contained under "Release Notes & Film Sizes" in this chapter.*

---

**5.6.3. Functional Description**

The Kodak/Imation Kodak/Imation 8500 Dry View imager has one dispenser in which one film size and different media types can be loaded by the user.

**Keypad control**

There is no manual keypad control possible.

**5.6.4. Service Notes**

This paragraph provides information on solving problems that may be encountered when configuring and/or operating this installation.

SBus/PCI

1. **Symptom**  
EasyVision RAD hang-up.

**Cause**

An image has been sent to the Kodak/Imation Kodak/Imation 8500 imager immediately after switching the Kodak/Imation Kodak/Imation 8500 imager on.

**Remedy**

Wait 1 minute before you switch on the EasyVision RAD.

2. **Symptom**  
?

**Cause**

EasyVision RAD sends 1:1 film only. No image interpolation is allowed.

**Remedy**

Switch the image interpolation off.

3. **Symptom**  
The imager reprints the same sheet several times.

**Cause**

EasyVision RAD receives an error message from the printer. EasyVision RAD asks for a reprint, but the printer has already printed the copy.

**Remedy**

Set the image time-out parameter to 300.

### 5.6.5. Tested Releases & Film Sizes

This paragraph provides a history of all software releases relevant to this interface, together with points to watch out for when using a particular release.

#### Philips

EasyVision RAD  
SBus/PCI

Release R4.X : Released for installation

*Matrices used 952* : 3384 \* 4272 11\*14"  
Grey 8 and Grey 12

*Matrices used SuperSet* : 3384 \* 4288 11\*14"  
(Clear and Blue base) Grey 8  
and Grey 12

Release R4.X.x.x : Released for installation

Kodak/Imation Kodak/Imation8500  
DRYVIEW

Release V1.15 : Released for installation.  
Release V1.22 : Released for installation

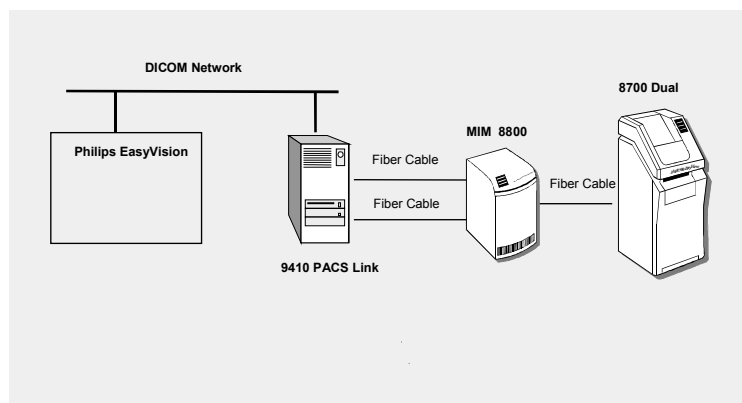
## 5.7. Kodak/Imation DICOM with 9410 / 8700 Dual

### 5.7.1. Type of Connection

The connection possibilities are:

- **Ethernet DICOM**  
EasyVision RAD R4.X.: Kodak/Imation8700

### 5.7.2. Configuration



**5.7.2.1. Philips**

For the configuration procedure of the EasyVision RAD work station refer to the release document.

Configuration parameters per release:

DICOM

EasyVision RAD R4.X : 3M 8700 DICOM

**5.7.2.2. Kodak/Imation**

- **Pacs Link 9410**

**Configuring the EasyVision RAD on the Pacs Link 9410:****Setup:**

Use the **Service Maintenance Tool (SMT)** :

- ⇒ Device Setup
- ⇒ DICOM Inputs
- ⇒ SCP Printers
  - ⇒ Registered Users
  - ⇒ Add New

**SCU AE Title****SCU IP Addr****SCP: DryView Printserver**

(Rest übernehmen)

**DICOM Menu (9410)**

AE Title	IMN_9410
Port Number	1024
Max Nbr. of Associations	5

**LOCAL PRINTER Menu****Output Board Parameters**

Baud Rate	19200
Parity	None
Data	8
Stop	1
Packet	
Pixel	8
Header/Line, Timeout	90
Transfer Rate	2 MHz

**LOCAL PRINTER Menu**

Default Parameters	
Command Set	SuperSet
Transfer Media	Fiber
Film Mismatch	Print Always
Interpolation Type	3M 831
Interp Num	0
Sharp	0
Bilinear	0
Contrast	9

### ■ 8800/8700 Dual Setup:

on COMM Menu:	969 Default
on IMAGE Menu:	
TFT	PMS
Dmax	3.00
Contrast	9
Density	14
on EIB Menu:	
Header Mode	Header/Line
Port	0
Parity	Enable
Parity	Even
Timeout	90

## 5.8. Kodak/Imation Dryview 8300 Standalone

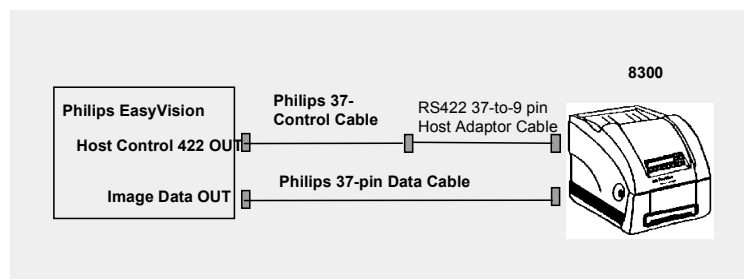
### 5.8.1. Type of Connection

The connection possibilities are:

- SBus/PCI, 952 ext. protocol (RS422, E, 1200, 8, 1)

### 5.8.2. Configuration

This section describes which parameters must be configured by the different parties. During configuration both Philips and Fuji service engineers must be present.



#### 5.8.2.1. Philips

For the configuration procedure of the EasyVision RAD work station refer to the release document.  
Configuration parameters per release:

- Sbus/PCI  
EasyVision RAD R4.X : 3M 8300 portrait / 3M 8300 landscape  
Interface=PCI/SBus, Printer= 3M 8300 Portrait, Name=dv8300  
Config. Media List: 14x17 G8=On (8-bit-print), 14x17 G12=Off (12-bit-print)

### 5.8.2.2. Kodak/Imation

#### 8300 Setup:

on 8300 Operator Menu set	
Density	16
Contrast	10
Film Layout	Format= 1on 1
Mode	Portrait
on 8300 Service Menu set:	
Serial Control Interface	
Baud Rate	1200
Nbr. of Data bits	8
Nbr. of Stop bits	1
Parity	Even
Protocol	Kodak/Imation
Digital Interface	
Parity	Odd
Modality	
Modality Group	0

### 5.8.3. Functional Description

The Kodak/Imation Kodak/Imation imager has one dispenser in which one film size (8 x 10") and different media types can be loaded by the user.

#### NOTE

The 8300 can handle only one film orientation (MODE) at the same time either portrait or landscape. If the film orientation should be changed the 8300 must be reconfigured.

#### Keypad control

There is no manual keypad control possible.

### 5.8.4. Service Notes

This paragraph provides information on solving problems that may be encountered when configuring and/or operating this installation.

1. Symptom  
EasyVision RAD hangs-up.

#### Cause

An image has been sent to the 8300 imager within the first 40 seconds of the 8300 being switched on.

#### Remedy

Wait 1 minute before you switch on the EasyVision RAD.

2. Symptom  
EasyVision RAD message: Printing sheet restarted.

#### Cause

EasyVision RAD uses the PTY command to find whether an imager supports the extended 952 protocol. If a response "INV,PTY" is received, the EasyVision RAD knows that the imager only understands the standard 952 protocol. The Kodak/Imation Kodak/Imation 8300 unfortunately raises an alarm 72 condition when a response of "INV,PTY" has been sent more than three times.



Remedy

Switch the imager Off/On to overcome this problem. The problem will be solved by Kodak/Imation Kodak/Imation in a new firmware release of the Kodak/Imation Kodak/Imation 8300 .

3. Symptom

EasyVision RAD printer test error: line time-out error message.

Cause

During the printer test the EasyVision RAD generates a line time-out error. The reason is a too short line time-out setting in the firmware of the Kodak/Imation Kodak/Imation 8300 . This problem will be solved by Kodak/Imation, but can occur in very extreme application conditions.

Remedy

None, until Kodak/Imation updates the firmware; but the problem will rarely show up during application. Solved in Dryview R4.1.1.

4. Symptom

Kodak/Imation Kodak/Imation 8300 printer performance slow.

Cause

The Kodak/Imation Kodak/Imation 8300 starts a new print session after the previous one when the sheet is also developed and after the memory is cleared. The new session cannot start before this memory has been cleared. The performance of the Kodak/Imation Kodak/Imation 8300 would increase if the memory is cleared directly after the image is printed, which is before the sheet is developed.

Remedy

None, until Kodak/Imation updates the firmware.

5. Symptom

EasyVision RAD is not able to print.

Cause

The Kodak/Imation Kodak/Imation 8300 firmware V4.06 is not compatible with the EasyVision RAD due to an incorrect implementation of the Kodak/Imation Kodak/Imation952 protocol.

Remedy

None, not compatible.

**5.8.5. Tested Releases & Film Sizes**

This paragraph provides a history of all software releases relevant to this interface, together with points to watch out for when using a particular release.

**Philips**

## EasyVision RAD

Release R4.X	: Released for installation (952 protocol).
<i>Matrices used SBus/PCI</i>	: 2736 * 2136 8 * 10" landscape : 2256 * 2676 8 * 10" portrait Grey 8
<i>Matrices used SCSI</i>	: 2736 * 2136 8 * 10" landscape : 2256 * 2676 8 * 10" portrait Grey 8

**Kodak/Imation**Kodak/Imation 3M 8300  
DRYVIEW

Release V4.03	: Released for installation.
Release V4.05	: Released for installation.
Release V4.1.1	: Released for installation.
Release V4.6	: Tested

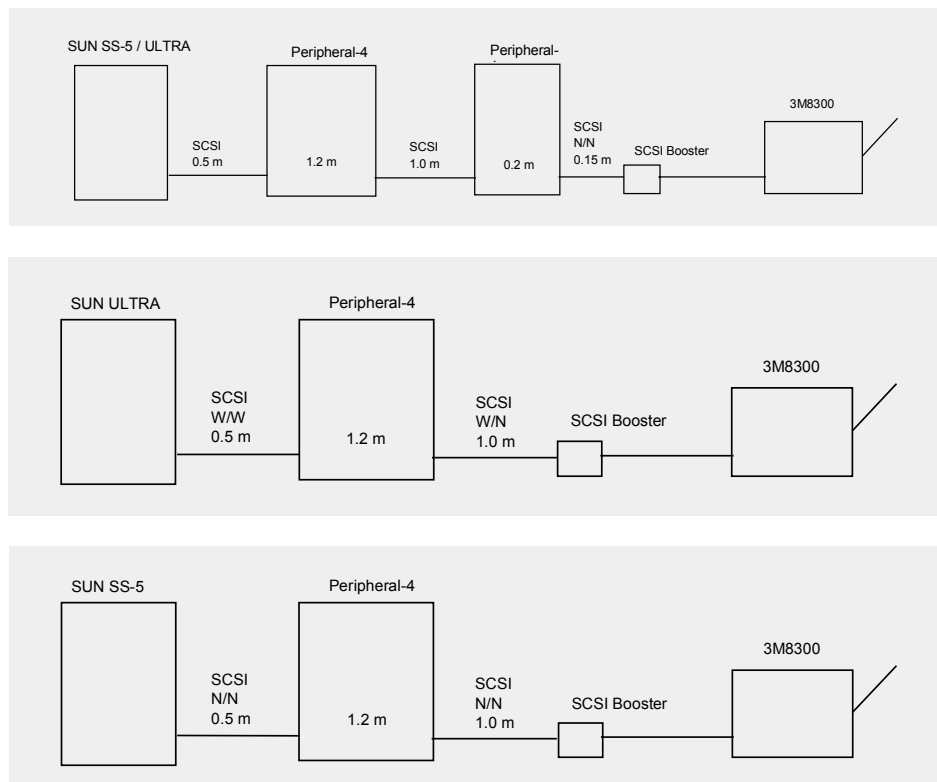
## 5.9. 3M 8300 SCSI

### 5.9.1. Type of Connection

The connection possibilities are:

- SCSI

### 5.9.2. Ordering Information



The 3M 8300 is delivered via the Kodak/Imation channels. All required interface cables can be ordered via the PMS service channels. The parts are also used in the EP1600 delivered via the PMS channels.

- 4522 163 15581: 0.15 meter (50P - 50P), to connect from the CD recordable to the SCSI booster.
- 2422 076 00278: 1.0 meter (68P - 50P), to connect from the peripheral 4 enclosure (used in the SUN ULTRA) to the SCSI booster.
- 4522 090 02811: 1.0 meter (50P - 50P), to connect from the peripheral 4 enclosure (used in the SUN SS-5) to the SCSI booster.
- 4522 500 36841: SCSI booster 110V
- 4522 500 36831: SCSI booster 230V
- 4522 500 36821: SCSI cable 15 feet

The SCSI interface maximum distance is 3 meters from the SUN Sparcstation upto the SCSI booster. The additional distance is achieved with a SCSI booster, which is part of the delivery.

### 5.9.3. Functional Description

The Kodak/Imation 3M imager has one dispenser in which one film size (8 x 10") and different media types can be loaded by the user.

**Note:** The 8300 can handle only one film orientation (MODE) at the same time either portrait or landscape. If the film orientation should be changed the 8300 must be reconfigured.

#### Keypad control

There is no manual keypad control possible.

### 5.9.4. Service Notes

This paragraph provides information on solving problems that may be encountered when configuring and/or operating this installation.

1. Symptom

EasyVision RAD hangs-up.

#### Cause

An image has been sent to the 8300 imager within the first 40 seconds of the 8300 being switched on.

#### Remedy

Wait 1 minute before you switch on the EasyVision RAD.

2. Symptom

EasyVision RAD message: Printing sheet restarted.

#### Cause

EasyVision RAD uses the PTY command to find whether an imager supports the extended 952 protocol. If a response "INV,PTY" is received, the EasyVision RAD knows that the imager only understands the standard 952 protocol. The Kodak/Imation 3M 8300 unfortunately raises an alarm 72 condition when a response of "INV,PTY" has been sent more than three times.

#### Remedy

Switch the imager Off/On to overcome this problem. The problem will be solved by Kodak/Imation 3M in a new firmware release of the Kodak/Imation 3M 8300 .

3. Symptom

EasyVision RAD printer test error: line time-out error message.

#### Cause

During the printer test the EasyVision RAD generates a line time-out error. The reason is a too short line time-out setting in the firmware of the Kodak/Imation 3M 8300 . This problem will be solved by Kodak/Imation, but can occur in very extreme application conditions.

#### Remedy

None, until Kodak/Imation updates the firmware; but the problem will rarely show up during application. Solved in Dryview R4.1.1.

4. Symptom

Kodak/Imation 3M 8300 printer performance slow.

#### Cause

The Kodak/Imation 3M 8300 starts a new print session after the previous one when the sheet is also developed and after the memory is cleared. The new session cannot start before this memory has been cleared. The performance of the Kodak/Imation 3M 8300 would increase if the memory is cleared directly after the image is printed, which is before the sheet is developed.

#### Remedy

None, until Kodak/Imation updates the firmware.

5. Symptom

EasyVision RAD is not able to print.

Cause

The Kodak/Imation 3M 8300 firmware V4.06 is not compatible with the EasyVision RAD due to an incorrect implementation of the Kodak/Imation 3M952 protocol.

Remedy

None, not compatible.

**5.9.5. Tested Releases & Film Sizes**

This paragraph provides a history of all software releases relevant to this interface, together with points to watch out for when using a particular release.

**Philips**

EasyVision RAD

Release R4.X : Released for installation (952 protocol).

*Matrices used SBus/PCI* : 2736 \* 2136 8 \* 10" landscape  
: 2256 \* 2676 8 \* 10" portrait  
Grey 8

*Matrices used SCSI* : 2736 \* 2136 8 \* 10" landscape  
: 2256 \* 2676 8 \* 10" portrait  
Grey 8

**Kodak/Imation**

Kodak/Imation 3M 8300

DRYVIEW

Release V4.03 : Released for installation.  
Release V4.04 : Never introduced in the field.  
Release V4.05 : Released for installation.  
Release V4.06 : NOT COMPATIBLE !  
Release V4.1.1 : Released for installation.  
Release V4.6 : Tested

## 5.10. DryView 8300 DICOM

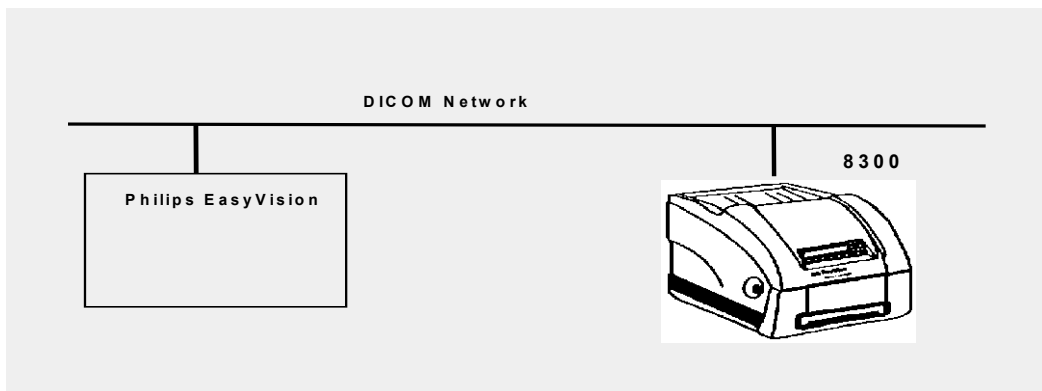
### 5.10.1. Type of Connection

The connection possibilities are:

- DICOM / Ethernet, 10BaseT or 10Base2 (Thinnet)

### 5.10.2. Configuration

This paragraph describes which parameters must be configured by the different parties. During the configuration both Philips and Kodak/Imation service engineers must be present.



#### 5.10.2.1. Philips

For the configuration procedure of the EasyVision RAD work station refer to the release document.  
Configuration parameters per release:

- 8300 portrait, DICOM  
EasyVision RAD R4.X: 3M 8300 portrait

##### Peripherals settings

set Interface=DICOM, Printer= 3M 8300, Name=dv8300, AE title=IMN\_8300  
into Config. Media List: 14x17 G8=On (8-bit-print), 14x17 G12=Off (12-bit-print)

##### DICOM Node

IP addr.=addr.of 8300, port=104, AETitle=IMN\_8300  
(in case of a DICOM connection problem set Max PDU=4K or 16K)

- In order to work properly with the built-in DICOM interface of the 8300 note the following regarding the configuration on the EV RAD.
  - Do not use DICOM autoconfiguration.
  - Make sure that in the DICOM panel only 'Print as SCP' is ON.
  - In the advanced settings panel of the DICOM node the following only settings should be selected:
 

- SCP print SOP classes:	BasicColor	OFF
- SCP transfer syntaxes:	All JPEG entries	OFF
- Transfer settings:	Detect syntax errors	ON
- Reject invalid images	ON	

**5.10.2.2. DICOM Node configuration on the EasyVision RAD****Mandatory entries in the EasyVision RAD DICOM configuration panel**

IP node name	DV8300 ( <i>user selectable</i> )
IP address	address of 8300
Port number	104
DICOM node system name	DV8300 (appears in the Application)
Application Entity Title	IMN_8300
Maximum PDU Length	8192 bytes
SCP setting	Print as SCP

**5.10.2.3. Kodak/Imation**

The settings are done via the local keypad of the Kodak/Imation 3M 8300. The most important are:

- aspect ratio: 1
- memory MGNT: 16MB

**Setup on 8300 for DICOM network** (via local keypad)

Menu level		
	A:NETWORK	(MENU ROADMAP)
4.	ETHERNET INTERFACE	
1.	ADDR	= XX : XX : XX : XX : XX : XX *
2.	IP ADDRESS SOURCE	= LOCAL
3.	IP-ADDR	= address of 8300
	AE TITLE	= IMN_8300 *
	PORT	= 104 *
4.	NETMASK	= --- . --- . --- . --- **
5.	CONNECTOR	= 10BaseT (Twisted Pair, RJ45)
6.	ROUTER	= --- . --- . --- . --- **
7.	CONFIGURE CLIENT DEFAULTS	
7.	CLIENT	EV1_192.0.0.1

\* fixed entry / value

\*\* t.b.s. by the Network Administrator

- on 8300 Operator Menu into Configure User set:  
Density=16  
Contrast=10  
Sharp/Smooth=1  
Film Layout : Format= 1 on 1, Mode= Portrait
- on 8300 Service Menu into Configure User set:  
Modality Group=0

**5.10.3. Functional Description**

The Kodak/Imation 3M imager has one dispenser in which one film size (8 x 10") and different media types can be loaded by the user.

**Note:** The 8300 DICOM can handle only one film in portrait orientation.

Keypad control  
There is no manual keypad control possible.

5.10.4. Service Notes

This paragraph provides information on solving problems that may be encountered when configuring and/or operating this installation.

5.10.5. Tested Releases & Film Sizes

This paragraph provides a history of all software releases relevant to this interface, together with points to watch out for when using a particular release.

**Philips**

EasyVision RAD

Release R4.X	: Released for installation
<i>Matrices used SBus/PCI</i>	: 2736 * 2136 8 * 10" landscape : 2256 * 2676 8 * 10" portrait Grey 8
<i>Matrices used SCSI</i>	: 2736 * 2136 8 * 10" landscape : 2256 * 2676 8 * 10" portrait Grey 8

**Kodak/Imation**

Kodak/Imation 3M 8300  
DRYVIEW

	Release V4.03	: Released for installation.
	Release V4.05	: Released for installation.
	Release V4.1.1	: Released for installation.
	Release V4.6	: Tested
8300 DICOM board	V 3.3	

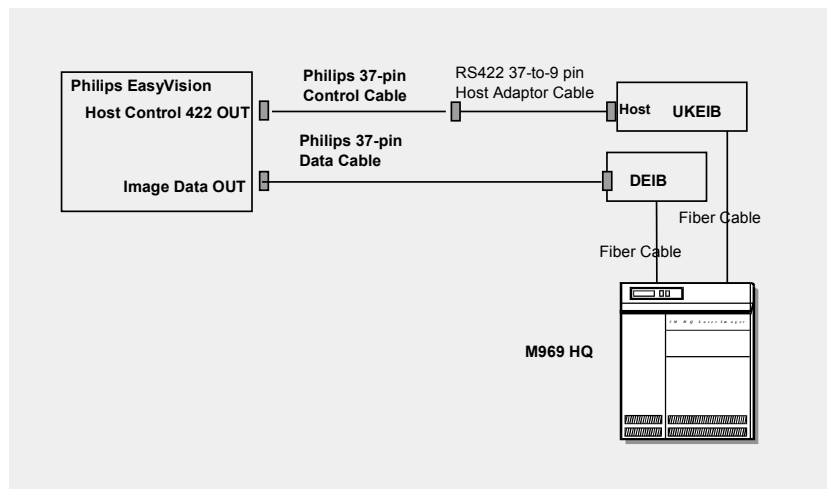
## 5.11. 3M 969 HQ

### 5.11.1. Type of Connection

The connection possibilities are:

- SBus/PCI, 952 ext. or SuperSet protocol (RS422, E, 1200, 8, 1)

### 5.11.2. Configuration



This paragraph describes which parameters must be configured by the different parties. During the configuration both Philips and Kodak/Imation service engineers must be present.

#### 5.11.2.1. Philips

For the configuration procedure of the EasyVision RAD work station refer to the release document. Configuration parameters per release:

- SBus/PCI  
EasyVision RAD R4.X: 3M HQ969



**5.11.2.2. Kodak/Imation****Configuration for Kodak/Imation Release 3.0:****952 protocol:**

B&W Input Module 1 COMM 0: IMS Communication Parameters			
Baud Rate	1200	Command Set	959
Stop Bits	1	Image Size Mode	Old
Data Bits	8	Alarm Mode	Old
Parity	Even	P1: PRI to DCR /	0
		PAS	
Parity Enable	Enable	P2: DCR to DCR /	0
		PAS	
Character Pacing	0	P3: STP to STC	0
End of Message	CR	P4: EXP to DCR /	0
		EOE	
Protocol	ACK / NACK	P5: EOE to PTC	0
Memory Full Resp	BSY	P6: DCR to STC	0
F1 [Help} ESC [Cancel Updates] CONTROL-RETURN [Save Updates]			

**969 protocol:**

B&W Input Module 1 COMM 0: IMS Communication Parameters			
Baud Rate	19200	Command Set	969
Stop Bits	1	Image Size Mode	Old
Data Bits	8	Alarm Mode	Old
Parity	Even	P1: PRI to DCR /	0
		PAS	
Parity Enable	Enable	P2: DCR to DCR /	0
		PAS	
Character Pacing	0	P3: STP to STC	0
End of Message	CR	P4: EXP to DCR /	0
		EOE	
Protocol	ACK / NACK	P5: EOE to PTC	0
Memory Full Resp	BSY	P6: DCR to STC	0
F1 [Help} ESC [Cancel Updates] CONTROL-RETURN [Save Updates]			

B&W Input Module 1 Parameter Set 0: Digital EIB Parameters			
Parity Enable	Enable	Pixels Per Line	3944
Test Pattern	No	Image Lines	4095
Header Mode	Header/Line	Pixel Width	8
Pre-scale	On	Parity	Odd
Time-out	300	Port	Port 0
Digital IF Timing	T6: Request Hold	200	
Protocol	T7: Request Inactive	255	
Memory Full Resp	T10: Retransmit Setup	255	
F1 [Help} ESC [Cancel Updates] CONTROL-RETURN [Save Updates]			

B&W Input Module 1 COMM 0: IMS Image Parameters			
Contrast Table (NVRAM)	9	B&W Border	0
Density Test Cnt Tbl Src	NVRAM	B&W Density	14
Rotate	No	B&W Dmax	3.0
Slides	Super	Aspect Ratio	1.00
Media Size	14 x 17	Media Type	BWGEN
Dmin Mode	Normal	P3: STP to STC	0
Horizontal 959 Host Sharp	6	Vertical 959 Host Sharp	6
959 Host Smooth	11	959 Host Smooth	11
969 Keypad Sharp / Smooth	11	969 Keypad Sharp / Smooth	11
F1 [Help] ESC [Cancel Updates] CONTROL-RETURN [Save Updates]			

B&W Input Module 1 COMM 0: IMS System Parameters			
EIB Type	Digital	Memory Width	9
Parameter Set	Set 0	Pixel width	8
User priority	Normal	Requeue Number	3
OEM Philips		Media Destination:	OM0 RecMag
Modality	EasyVision RAD	Enlarge Formats	No
Dual Switch	Off		
User ID			
ID Fgnd B&W Intensity	3000	ID Bgnd B&W Intensity	1000
F1 [Help] ESC [Cancel Updates] CONTROL-RETURN [Save Updates]			

### 5.11.3. Functional Description

The Kodak/Imation 3M 969 HQ imager has one dispenser in which different film sizes and media types can be loaded by the user.

#### Keypad control

There is no manual keypad control possible.

### 5.11.4. Service Notes

This paragraph provides information on solving problems that may be encountered when configuring and / or operating this installation.

#### 1. Symptom

Laser imager does not print and all service test programs run correctly.

#### Cause

In R1.1 the matrix size is too large for a Kodak/Imation software version lower than 3.0.

Remedy

Ask Kodak/Imation to install software version 3.0.

2. Symptom

The imager reprints the same sheet several times.

Cause

EasyVision RAD receives an error message from the printer. EasyVision RAD asks for a reprint, but the printer has already printed the copy.

Remedy

Set the image time-out parameter to 300.

**5.11.5. Tested Releases & Film Sizes**

This paragraph provides a history of all software releases relevant to this interface, together with points to watch out for when using a particular release.

**Philips**

EasyVision RAD

Release R4.X : Released for installation (952 protocol).

*Matrices used 952* : 4096 \* 4996 14 \* 17"  
: 3128 \* 4088 11 \* 14"  
: 2184 \* 2920 8 \* 10"  
Grey 8

*Matrices used SuperSet* : 4096 \* 4996 14 \* 17"  
: 4096 \* 3120 11 \* 14"  
: 2920 \* 2180 8 \* 10"  
(Clear and Blue base) Grey 8

**Kodak/Imation**

Kodak/Imation 3M969 HQ

Release 1.0 : Released for installation.

*Note* : Update to Kodak/Imation 3M Release 3.0

Release 2.1 : Released for installation.

*Note* : Update to Kodak/Imation 3M Release 3.0

Release 3.0 : NOT COMPATIBLE !

Release 4.2 : Released for installation.

Release 5.1 : tested

## 5.12. 3M 959 XL

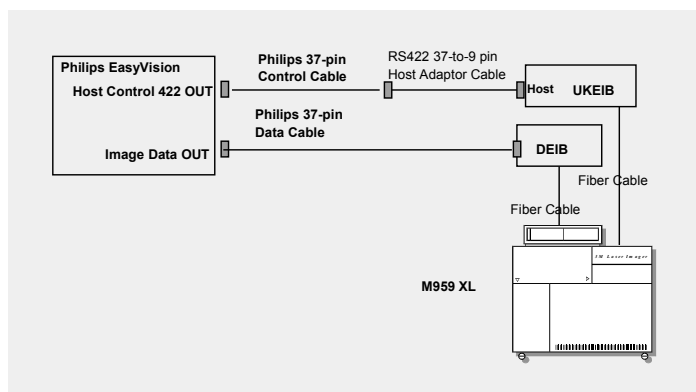
### 5.12.1. Type of Connection

The connection possibilities are:

- SBus/PCI, 952 protocol (RS422, E, 1200, 8, 1)

### 5.12.2. Configuration

This paragraph describes which parameters must be configured by the different parties. During the configuration both Philips and Kodak/Imation service engineers must be present.



#### 5.12.2.1. Philips

For the configuration procedure of the EasyVision RAD work station refer to the release document. Configuration parameters per release:

- SBus/PCI  
EasyVision RAD R4.X: 3M M959

#### 5.12.2.2. Kodak/Imation

#### Configuration for Kodak/Imation 3M Release 4.X

B&W Input 1 COMM 0: <b>IMS Communication Parameters for 952 protocol</b>			
Baud Rate	1200	Command Set	959
Stop Bits	1		
Data Bits	8		
Parity	Even		
Parity Enable	Enable		
Character Pacing	0		
End of Message	CR		
Protocol	ACK / NACK		
F1 [Help]    ESC [Cancel Updates]    CONTROL-RETURN [Save Updates]			

B&W Input 1 COMM 0: <b>IMS Communication Parameters for 969 protocol</b>			
Baud Rate	19200	Command Set	969
Stop Bits	1		
Data Bits	8		
Parity	Even		
Parity Enable	Enable		
Character Pacing	0		
End of Message	CR		
Protocol	ACK / NACK		
F1 [Help]    ESC [Cancel Updates]    CONTROL-RETURN [Save Updates]			

B&W Input Module 1 COMM 0: <b>IMS Image Parameters</b>			
Contrast	9	Match Border	Yes
Dmax	3.00		
Density	12	Dmin Mode	Normal
Border	0	TFT	PMSV3KC
969 Cmd Set Beta			
Horizontal	15		
Vertical	15		
F1 [Help]    ESC [Cancel Updates]    CONTROL-RETURN [Save Updates]			

B&W Input Module 1 COMM 0: <b>Host Parameters</b>			
Image Size Mode	Old	Aspect Ratio	1
Alarm Mode	Old		
P1: PRI to DCR / PAS	0	831 Cmd Set Beta	
		Tables	
P2: DCR to DCR / PAS	0	Horizontal Sharp	15
P3: STP to STC	0	Smooth	2
P4: EXP to DCR / EOE	0		
P5: EOE to PTC	0	Vertical Sharp	15
P6: DCR to STC	0	Smooth	2
Memory Full Resp	BSY	Density Test Contrast	NVRAM
Override 952 Beta	No		
Framing	No	Scale Format	No
Pixel Correction	No	Scale Magnification	No
F1 [Help]    ESC [Cancel Updates]    CONTROL-RETURN [Save Updates]			

B&W Input Module 1 COMM 0: <b>IMS System</b> Parameters			
Parameter Set	0	Interface	Digital EIB
User priority	Normal	Media Size	14x17
		Media Type	DRYB
FIB Port	0	Requeue	3
		Modality	DIGITAL
		User ID	EasyVision RAD
F1 [Help} ESC [Cancel Updates] CONTROL-RETURN [Save Updates]			

B&W Input Module 1 Parameter Set 0: <b>Digital EIB</b> Parameters			
Test Pattern	Disable	Pixels Per Line	3944
Header Mode	Header/Line	Image Lines	4792
		Pixel Width	8
Time-out	300	Parity	Odd
Parity Enable	Enable	Port	Port 0
Digital Timing	T6: Request Hold	200	
	T7: Request Inactive	255	
	T10: Retransmit Setup	255	
F1 [Help} ESC [Cancel Updates] CONTROL-RETURN [Save Updates]			

### 5.12.3. Functional Description

The Kodak/Imation 3M 959 XL imager has one dispenser which can handle one film size. The imager does not support media size selection.

#### Keypad control

There is no manual keypad control possible.

### 5.12.4. Service Notes

This paragraph provides information on solving problems that may be encountered when configuring and / or operating this installation.

There is no information available.

**5.12.5. Tested Releases & Film Sizes**

This paragraph provides a history of all software releases relevant to this interface, together with points to watch out for when using a particular release.

**Philips**

EasyVision RAD

Release R4.X : Released for installation.

*Matrices used* : 3944 \* 4792 14 \* 17"  
Grey 8

**Kodak/Imation**Kodak/Imation 3M959  
XL

Release 1.0 : Released for installation.

*Note* : *Update to Kodak/Imation 3M Release 2.1*

Release 2.1 : Released for installation.

Release 3.0 : Released for installation.

Release 4.2 : Released for installation.

## 5.13. 3M 952

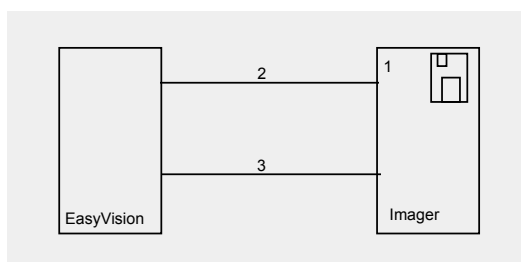
### 5.13.1. Type of Connection

The connection possibilities are:

- SBus/PCI, 952 protocol (RS422, E, 1200, 8, 1)

#### Configuration

This paragraph describes which parameters must be configured by the different parties. During the configuration both Philips and Kodak/Imation service engineers must be present.



#### 5.13.1.1. Philips

For the configuration procedure of the EasyVision RAD work station refer to the release document.  
Configuration parameters per release:

- SBus/PCI  
EasyVision RAD R4.X: 3M M952

#### 5.13.1.2. Kodak/Imation

MEMORY (5 \* 4 Mbyte) Total = 20 MByte

##### SWITCHES MCS

SW1 ==>	OFF (SWITCH POINTED TO THE GROUND)	
SW2 ==>	RESET BUTTON	
SW3 ==>	0	
SW4 ==>	0	
SW5 ==>	1 - ON	2 - ON 3 - ON 4 - OFF
SW 6 ==>	1 - OFF (ON for analogue interface)	2 - OFF 3 - OFF 4 - OFF
SW7 ==>	0	FACTORY SETTINGS
SW8 ==>	0	FACTORY SETTINGS
SW9 ==>	7	(BAUD RATE 1200)



**SOFTWARE VERSION EPROMS ON MCS BOARD**

IC 14 Kodak/Imation 3M - VER - MT + 2.3 Codeno. 78-8063-3536-6	12/89
IC 12 Kodak/Imation 3M - VER - LT + 2.3 Codeno. 78-8063-3535-8	12/89
IC 10 Kodak/Imation 3M - VER - LT + 2.3 Codeno. 78-8063-3534-1	12/89

**SYSTEM CONTROLLER**

JUMPERS System Controller:

Image Parity      ODD  
Control Parity    EVEN

**EPROMS System Controller**

IC Z6	Kodak/Imation 3M - VER - 2.31	Order NR	78-8063-3528-3	04/90
IC Z7	Kodak/Imation 3M - VER - 2.3	Order NR	78-8063-3529-1	12/89
IC Z8	Kodak/Imation 3M - VER - 2.3	Order NR	78-8063-3530-9	12/89
IC Z9	Kodak/Imation 3M - VER - 2.31	Order NR	78-8063- 3531-7	04/90
IC Z10	Kodak/Imation 3M - VER - 2.31	Order NR	78-8063-3532-5	04/90
IC Z29	Kodak/Imation 3M - VER 2.3	Order NR	78-8063-3533-3	12/89

- latest Version 2.6

**EPROMS OUTPUT FORMATTER**

IC U24 LUT 321A

IC U46 LUT 321A

**RECOMMENDED PANEL SETTINGS**

Contrast setting 9 for Dmax = 3.0

There is another switch for RS232 / RS422 at the rear of the machine.  
This switch needs to be selected for RS422.

**5.13.2. Functional Description**

The Kodak/Imation 3M 952 imager has one dispenser which can handle one film size. The imager does not support media size selection.

Keypad control

There is no manual keypad control possible.

**5.13.3. Service Notes**

This paragraph provides information on solving problems that may be encountered when configuring and / or operating this installation.

**1. Symptom**

Images printed directly from the MR or CT do not have the same appearance as images printed via the EasyVision RAD.

Cause

The MR and CT system do not have calibration possibilities and use the lookup table in the printer. The images printed via EasyVision RAD are calibrated to the target curve. The two input channels of the printer use the same lookup table. Although the target curve for the EasyVision RAD equals the lookup table curve of the printer input, there will still be a difference in density between the two channels.

Remedy

Calibrate the EasyVision RAD with the default values instead of the measured values and enter the minimum as well as the maximum density values in the EasyVision RAD menu. The EasyVision RAD is now calibrated linearly.  
Both channels will now have the same density values.

**5.13.4. Tested Releases & Film Sizes**

This paragraph provides a history of all software releases relevant to this interface, together with points to watch out for when using a particular release.

**Philips**

EasyVision RAD

Release R4.X : Released for installation.  
  
*Matrices used* : 3944 \* 4792 14 \* 17"  
Grey 8

**Kodak/Imation**

Kodak/Imation 3M952

Release 2.3 : Released for installation.

## 5.14. 3M P831

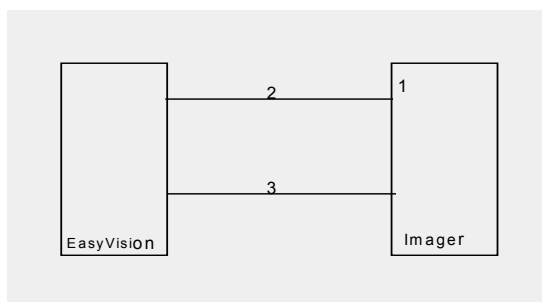
### 5.14.1. Type of Connection

The connection possibilities are:

- SBus/PCI, 952 protocol (RS422, E, 1200, 8, 1)

### 5.14.2. Configuration

This paragraph describes which parameters must be configured by the different parties. During the configuration both Philips and Kodak/Imation service engineers must be present.



#### 5.14.2.1. Philips

For the configuration procedure of the EasyVision RAD work station refer to the release document.  
Configuration parameters per release:

- SBus/PCI  
EasyVision RAD R4.X: 3M P831

#### 5.14.2.2. Kodak/Imation

##### Settings:

Control	RS422, even, 1200, 8, 1
Image	RS422, odd

**Configuration for Kodak/Imation 3M Release 2.1:**

MEMORY (5\*4 MBYTE): TOTAL = 20Mbyte

**SWITCHES MCS**

SW1 ==>	OFF (Pointed to the earth)	
SW2 ==>	RESET BUTTON	
SW3 ==>	0	
SW4 ==>	0	
SW5 ==>	1 - ON	
	2 - ON	
	3 - ON	
	4 - OFF	
SW 6 ==>	1 - OFF	
	2 - OFF	
	3 - OFF	
	4 - OFF	
SW7 ==>	0	FACTORY SETTINGS
SW8 ==>	0	FACTORY SETTINGS
SW9 ==>	7	(BAUD RATE 1200)

**SOFTWARE VERSION EPROMS ON MCS BOARD**

IC 14	: Kodak/Imation 3M - VER - MT 0187/09/02
IC 12	: Empty
IC 10	: Kodak/Imation 3M - VER - LT 0487/12/09

**SYSTEM CONTROLLER**

JUMPERS	: System Controller:
Parity	: Enable
	: Odd

**EPROMS System Controller**

IC Z4	: VER 1179
IC Z5	: VER 1179
IC Z6	: VER 1179
IC Z7	: Contrast 32.A0/32.B0
IC Z8	: VER 1179
IC Z9	: VER 1179
IC Z10	: EMPTY

There is another switch for RS232 / RS422 at the rear of the machine. Select this switch for RS422.

**RECOMMENDED FRONT PANEL SETTINGS**

Contrast	: Set to 5
positive	
Contrast	: Set to 5
negative	
Border switch	: Set to BLACK
Density	: To be used for Dmax = 3.0

5.14.3. Functional Description

The Kodak/Imation 3M P831 imager has one dispenser which can handle one film size.

Keypad control

There is no manual keypad control possible.

5.14.4. Service Notes

This paragraph provides information on solving problems that may be encountered when configuring and / or operating this installation.

There is no information available.

5.14.5. Tested Releases & Film Sizes

This paragraph provides a history of all software releases relevant to this interface, together with points to watch out for when using a particular release.

Philips

EasyVision RAD

Release R4.X : Released for installation.

Matrices used : 3944 \* 4840 14 \* 17"  
Grey 8

Kodak/Imation

Kodak/Imation 3M P831

Release 1.0 : Released for installation.

Note : Update to Kodak/Imation 3M Release 2.1

Release 2.1 : Released for installation.

Release 3.0 : Released for installation.

## 6. Connectivity KODAK Imagers

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## 6.1. INTRODUCTION

This section describes various aspects of the connection / interfacing of a Philips EasyVision RAD to Kodak laser imagers. For the installation and configuration procedures refer to the corresponding service and release manuals. This document contains information for service engineers (Philips & Kodak) to verify if the set-up is identical to that tested and released by the PMG.

## 6.2. KODAK MLP 190

### 6.2.1. Type of Connection

The connection possibilities are:

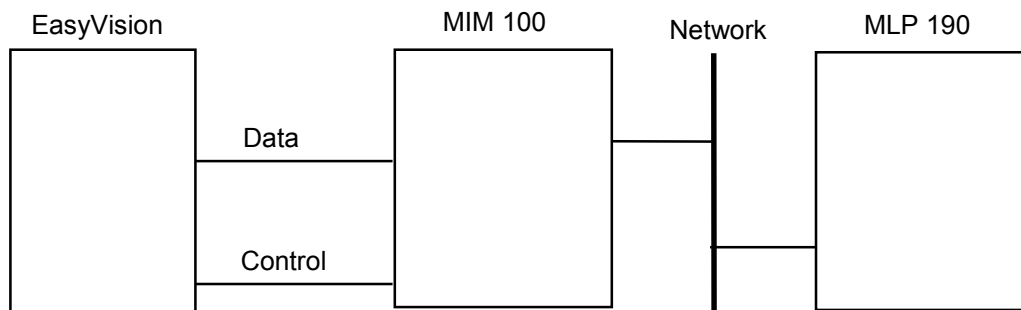
Ethernet, DICOM protocol

SBUS / PCI, KCL protocol (RS422, E, 1200, 8, 1) using a MIM

### 6.2.2. Ordering Information

#### 6.2.2.1. SBUS / PCI

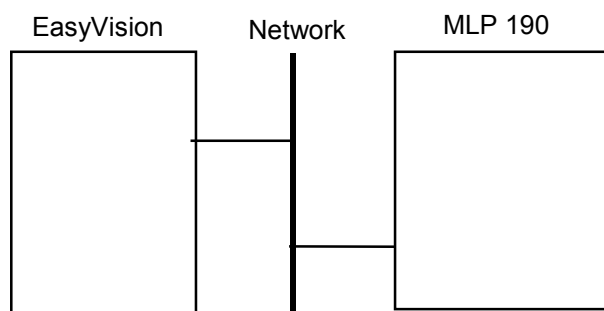
For a SBUS / PCI (point to point) connection the following can be ordered:



Ordering information T.b.s.



### 6.2.2.2. Ethernet



The network connection is always present at the modality side. No special items have to be ordered.

### 6.2.3. Configuration

This section describes which parameters must be configured by the different parties. During the configuration both Philips and Kodak service engineers must be present.

#### 6.2.3.1. Philips

For the configuration procedure of the EasyVision RAD refer to the release document.

Configuration parameters per release:

SBUS / PCI

EasyVision RAD R4.X: Kodak MLP 190

DICOM

EasyVision RAD R4.X: Kodak MLP 190

#### EasyVision RAD Configuration for printing on MLP190 via DICOM

IP Node Name	Kodak
IP Address	--- . --- . --- . ---
Port Number	5040
DICOM Node System Name	Kodak
Application Entity Title	PRINT_SCP
SCP Settings	Print as SCP
	Basic Greyscale
	implicit Little Endian
	Allow private Attributes
	Modify images to check level

### 6.2.3.2. Kodak

#### DICOM configuration:

The maximum number of simultaneous associations must be configured by Kodak to 4.

Philips requires the next parameters from Kodak:

IP address

AE title

Port number

To configure the MLP190 from the local Keypad select **2 SETUP**

Contrast Pivot Density	...
Network IP Address	192 . 0 . 0 . 5
Subnet Mask	--- . --- . --- . ---
Gateway Address	--- . --- . --- . ---
Port	05040
Network Node Name	Kodak MLP190
Connection Type	RJ45
Display Language	....

#### Sbus / PCI configuration (on MIM100):

Board/Channel:	Digital Board Channel 1	
Logical Name:	Ch#1	
Database Name:	Unqualified   EasyVision	
Primary Control Type	KCL	Com Port: COM4
Auxiliary control	<input checked="" type="checkbox"/> Keypad Vertical: COM5	
Aspect Ratio	Horizontal: 1	Vertical: 1
Page Preallocation	<input checked="" type="checkbox"/> Enable Preallocation of Image Memory	
<div>OK</div> <div>Cancel</div>		

Digital Interface Configuration (Acquisition)	
Image Size	Parity
Pixels Per Line: <input type="text" value="4096"/>	<input type="radio"/> None
Lines Per Image: <input type="text" value="5120"/>	<input checked="" type="radio"/> Odd
	<input type="radio"/> Even
Timer	Sync Mode
Line Timer: <input type="text" value="10"/>	<input checked="" type="radio"/> Off <input type="radio"/> On
Pixel Depth	
<input checked="" type="radio"/> 8 Bit	<input type="radio"/> 10 Bit
	<input type="radio"/> 12 Bit
<input type="checkbox"/> Temporary	<input type="radio"/> Default
	<input checked="" type="radio"/> Last Saved
<input type="button" value="Set"/>	<input type="button" value="Reset"/>
<input type="button" value="Cancel"/>	

KCL Autofilming Parameters	
Serial Port	
Port: <input type="text" value="COM4"/>	
Baud Rate: <input type="text" value="1200"/>	Driver Type: <input type="text" value="RS422"/>
Data Bits: <input type="text" value="8"/>	StopBits: <input type="text" value="1"/>
	Parity: <input type="text" value="Even"/>
Protocol	
Ack Wait Timer <input type="text" value="5"/>	Receive Message Timer <input type="text" value="5"/>
Start Timer: <input type="text" value="2"/>	
Auxiliary Keypad	
Switch Mode	Switch Handling:
<input type="text" value="Keypad"/>	<input type="text" value="Not Allowed"/>
	<input checked="" type="checkbox"/> Store Key Active
<input type="checkbox"/> Temporary	<input type="radio"/> Default
<input type="button" value="Set"/>	<input checked="" type="radio"/> Last Saved
<input type="button" value="Reset"/>	
<input type="button" value="Cancel"/>	

6.2.4. Functional Description

The Kodak has the possibility for one dispenser, which can be loaded with different film sizes by the user. The imager is able to report the media size and matrix type (blue base or clear base).

Keypad control  
There is no manual keypad control possible.

6.2.5. Service Notes

This section provides information on solving problems that may be encountered when configuring and/or operating this installation.

6.2.6. Tested Releases & Film Sizes

This section provides a history of all software releases relevant to this interface, together with points to watch out for when using a particular release.

<b>Philips</b>		
EasyVision RAD		
	Release 4.X	: Released for installation.
	<i>Matrices used SBUS / PCI</i>	: 4096 * 5120 14 * 17" (Clear base and blue base) Grey 8
	<i>Matrices used DICOM</i>	: 4096 * 5120 14 * 17" (Clear base and blue base) Grey 8
<b>KODAK</b>		
MLP 190		
	Printer Software V1.5.9	: Released for installation.
	Printer Software V1.07.29	: Tested July 99

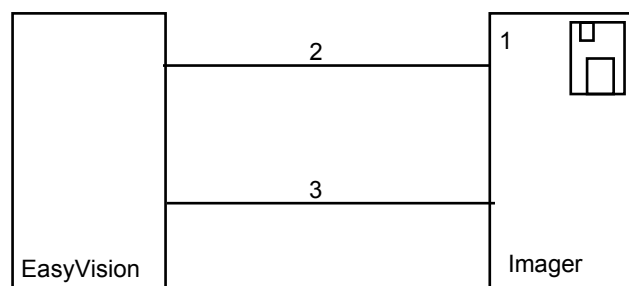
### 6.3. KODAK 2180

#### 6.3.1. Type of Connection

The connection possibilities are:  
SBUS / PCI, KCL protocol (RS422, E, 1200, 8, 1)

#### 6.3.2. Ordering Information

For a SBUS / PCI (point to point) connection the following can be ordered:



Ordering information T.b.s.

Control cable (37P) connections required:

2	: TXD-
3	: RXD-
7	: Signal ground
20	: TXD+
21	: RXD+

#### 6.3.3. Configuration

This section describes which parameters must be configured by the different parties. During the configuration both Philips and Kodak service engineers must be present.

##### 6.3.3.1. Philips

For the configuration procedure of the EasyVision RAD workstation refer to the release document.

Configuration parameters per release:

SBUS / PCI

EasyVision RAD R4.X: Kodak KELP2180

**6.3.3.2. Kodak**

24 MByte page memory is required.

Configuration:

**Device parameters**

Pixels/Line	4096	See service notes number 1.
Lines/Image	4096	
Horiz Pixel Aspect (1 - 255) [ 1]:	1	
Vert Pixel Aspect (1 - 255) [ 1]:	1	

**Channel Configuration Table**

Device ID ( 0-2 )	1
Host Protocol Type	KCL
Enable Auxiliary Keypad? (Y/N)	Y [N]
Image Data Port Id (1)	1
Input Priority (0 - 15)	15
Channel Active (T or F)	T
Channel Name [ev]	ev
Page Preallocation(Y/N)	N

**Set Image Handler Tables**

Line Timer (0-600)	59
Img Parity (0-None,1-Even,2-Odd)	2
Transfer Mode (1-Partial,2-Whole)	1
Sync Mode (1-AutoSync 2-No Sync)	2 [1]
Bits / Pixel (8, 12)	8

**Command port configuration**

Stop Bits (1 or 2)	1
Parity (0-None,1-Even,2-Odd)	1
Data Length (7 or 8)	8
Baud Rt (300,1200,2400,9600)	1200
Driver Type (232 or 422)	RS422
Receive Frame Tmr (0-999,or 65535=OFF)	5
Start Timer (0-999,or 65535=OFF)	2
Ack Wait Timer (0-999,or 65535=OFF)	5
Start Timeout Ctr (0-255,or 65535=OFF)	65535
Ack Wait Counter (0-255,or 65535=OFF)	3
Max Rejects Counter (0-255,or 65535=OFF)	3
Print Scale Info for Requested Image (0=OFF, 1=ON)	0
Auxiliary Keypad Switch Mode	
1-Switch Disabled - Display Only	
2-Keypad Controls Switch	
3-Host Controls Switch	3

Keypad Switch handling when images have been stored:

1-Switch Not Allowed with Images Stored	1
2-Print Page and Then Switch	
3-Retain Images during Switch	

Auxiliary Keypad Store Key Active? (0-No, 1-Yes) [1]:	1
Auxiliary Keypad Message Tone (1-ON, 2-OFF) [1]:	1

**Other settings**

Interpolation	Cubic Spline
Curve shape	3
Contrast	0
Max density	3.00
Min density	0.2

### 6.3.4. Functional Description

The Kodak has the possibility for two dispensers, which can be loaded with different film sizes by the user. The imager is able to report the media size and matrix type (blue base or clear base).

#### Keypad control

There is no manual keypad control possible.

### 6.3.5. Service Notes

This section provides information on solving problems that may be encountered when configuring and/or operating this installation.

#### Symptom

Film size selection not possible.

#### Cause

The Kodak 2180 has the possibility to select different film formats. If the settings Pixel per line and Lines per image are set for the large format, it is not possible to select small formats.

#### Remedy

Select the minimum values, which are the settings for the smallest film size.

#### Symptom

No image printed.

#### Cause

The EasyVision RAD gives an HCU error with a Kodak KELP 100 XLP or 2180 or 1120. The problem occurs most likely during installation.

#### Remedy

The EasyVision RAD sends a complete matrix to the laser imager. In the test mode the control path is correct and the data path gives an error. Switch OFF the COMMON TEXT (DISABLE) in the laser imager, ask the Kodak engineer to do this.

#### Symptom

EasyVision RAD gives an error message after several printed pages.

#### Cause

The Kodak 2180 can be configured for study reprinting. All incoming images are copied to the hard disc and then printed. If, for example, 2 \* 500MB hard discs are installed and 80% is configured for study reprint, and more inputs are hooked up to the Kodak 2180, there is a possibility that a hang-up occurs after several prints from EasyVision RAD.

#### Remedy

Re-configure the study reprint in the imager to give more disc space or switch the study reprint OFF.

6.3.6. Tested Releases & Film Sizes

This section provides a history of all software releases relevant to this interface, together with points to watch out for when using a particular release.

Philips

EasyVision  
RAD

Release R4.X	: Released for installation.
<i>Matrices used</i>	: 4096 * 5120 14 * 17" 4096 * 4128 14 * 14" 3232 * 4128 11 * 14" 2280 * 2836 8 * 10" (Clear base and blue base) Grey 8

Kodak  
2180

Release 2.3	: Released for installation.
Release 2.5	: Released for installation.



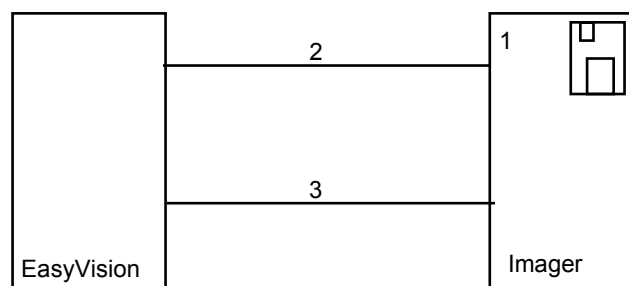
## 6.4. KODAK 1120

### 6.4.1. Type of Connection

The connection possibilities are:  
SBUS / PCI, KCL protocol (RS422, E, 1200, 8, 1)

### 6.4.2. Ordering Information

For a SBUS / PCI (point to point) connection the following can be ordered:



Ordering information T.b.s.

Control cable (37P) connections required:

2	: TXD-
3	: RXD-
7	: Signal ground
20	: TXD+
21	: RXD+

### 6.4.3. Configuration

This section describes which parameters must be configured by the different parties. During the configuration both Philips and Kodak service engineers must be present.

#### 6.4.3.1. Philips

For the configuration procedure of the EasyVision RAD refer to the release document.

Configuration parameters per release:

SBUS / PCI

EasyVision RAD R4.X: Kodak KELP1120

**6.4.3.2. Kodak**

24 MByte page memory is required.

**DISPLAY ACTIVE MODALITY PARAMETERS**

DEVICE ID	[1]
DEVICE NAME	[PHILIPS]
PIXELS/LINE	[512]
LINES/IMAGE	[512]

**SET CHANNEL CONFIGURATION TABLE**

1 CHANNEL 1	
DEVICE ID (0 - 2)	[1]
COMMAND PORT ID (1 - 3)	[3]

**HOST PROTOCOL TYPE:**

1 KCL   2 USP/SPCI   3 KEYPAD   4 P831-E	
5 TOSHIBA   6 M952   7 USP/FSPOT   8 USP/DASM	
CHOOSE ONE	[1]
DEFINE A SECONDARY HCL? (Y/N)	[N]
IMAGE DATA PORT ID (1)	[1]
INPUT PRIORITY (0 - 15)	[15]
CHANNEL ACTIVE (T OR F)	[T]

**SET IMAGE DATA PARAMETERS**

LINE TIMER(0-59)	[59]
IMG PARITY(0-NONE,1-EVEN,2-ODD)	[2]
TRANSFER MODE(1-PARTIAL,2-WHOLE)	[1]
SYNC MODE(1-AUTOSYNC 2-NO SYNC)	[2]

**SET COMMAND PORT CONFIGURATION TABLE**

CHANNEL 1	COMMAND PORT 3
STOP BITS(1 OR 2)	[1]
PARITY(0-NONE,1-EVEN,2-ODD)	[1]
DATA LENGTH(7 OR 8)	[8]
BAUD RT(300,1200,2400,9600)	[1200]
DRIVER TYPE(232 OR 422)	[RS422]
RECEIVE FRAME TMR(0-999,OR 65535=OFF)	[5]
START TIMER(0-999,OR 65535=OFF)	[2]
ACK WAIT TIMER(0-999,OR 65535=OFF)	[2] -> 5
START TIMEOUT CTR(0-255,OR 65535=OFF)	[65535]
ACK WAIT COUNTER(0-255,OR 65535=OFF)	[3]
MAX REJECTS COUNTER(0-255,OR 65535=OFF)	[10] -> 3
AUXILIARY KEYPAD SWITCH MODE	[1]
	Switch disabled
Display only [1]	
AUX KEYPAD MESSAGE TONE (OFF=2)	[2]
PRINTSCALE INFO FOR REQUESTED IMAGE SIZES(OFF=0)	[0]

**6.4.4. Functional Description**

Kodak has one dispenser and is able to report media size and media type (blue base and clear base).

Keypad control

There is no manual keypad control possible.

### 6.4.5. Service Notes

This section provides information on solving problems that may be encountered when configuring and/or operating this installation.

#### Symptom

Film size selection not possible.

#### Cause

The Kodak 1120 has the possibility to select different film formats. If the settings Pixel per line and Lines per image are set out for the large format, it is not possible to select small formats.

#### Remedy

Select the minimum values, which are the settings for the smallest film size.

#### Symptom

No image printed (HCU error on EasyVision RAD).

#### Cause

The EasyVision RAD gives an HCU error with a KODAK KELP 100 XLP or 2180 or 1120. The problem occurs most likely during installation.

#### Remedy

The EasyVision RAD sends a complete matrix to the laser imager. In the test mode the control path is correct and the data path gives an error. switch OFF the COMMON TEXT (DISABLE) in the laser imager, ask the KODAK engineer to do this.

#### Symptom

Noise test image distortion and application images can be completely distorted.

#### Cause

The compression algorithm in the Kodak imager is the cause of the image distortion problem when using a large matrix size.

#### Remedy

The Kodak engineer should switch of the file compression in the channel configuration menu: Page pre-allocation - Yes.

### 6.4.6. Tested Releases & Film Sizes

This section provides a history of all software releases relevant to this interface, together with points to watch out for when using a particular release.

#### **Philips**

##### EasyVision RAD

Release R4.X : Released for installation.

*Matrices used* : 4096 \* 5132 14 \* 17"  
4096 \* 4104 14 \* 14"  
4096 \* 3232 11 \* 14"  
2304 \* 2896 8 \* 10"  
(Clear base and blue base) Grey 8

#### **Kodak**

##### 1120

Release 2.3 : Released for installation.  
Release 2.5 : Released for installation  
Release 2.8.3 . Tested July 99

## 6.5. KODAK KELP 100 / KEIM

### NOTE

*The Kodak KELP 100 / KEIM is no longer supported by Philips.*

---

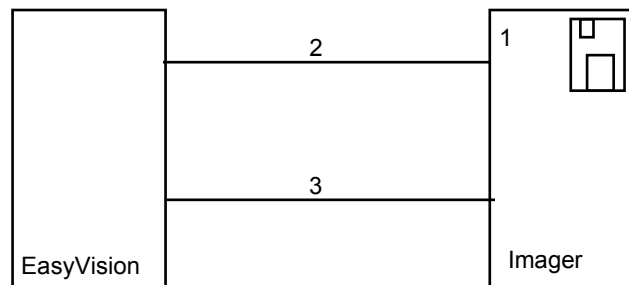
### 6.5.1. Type of Connection

The connection possibilities are:

SBUS / PCI, KCL protocol (RS422, E, 1200, 8, 1)

### 6.5.2. Ordering Information

For a SBUS / PCI (point to point) connection the following can be ordered:



Ordering information T.b.s.

Control cable (37P) connections required:

2:	TXD-
3:	RXD-
7:	Signal ground
20:	TXD+
21:	RXD+

### 6.5.3. Configuration

This section describes which parameters must be configured by the different parties. During the configuration both Philips and Kodak service engineers must be present.

#### 6.5.3.1. Philips

For the configuration procedure of the EasyVision RAD work station refer to the release document.

Configuration parameters per release:

SBUS / PCI

EasyVision RAD R4.X: Kodak KELP100 or Kodak KELP100plusKEIM

**6.5.3.2. Kodak**

24 MByte page memory is required.

COMMAND MODE (1=KEYPAD, 2=SERIAL LINK)	(2)
BAUD RATE (1=300, 2=1200, 3=2400, 4=9600)	(2)
SET STOP BITS (1=1 StopB, 2=2 StopB)	(1)
DATA LENGTH (1=7 BITS, 2=8 BITS)	(8)
SET PARITY (1=ODD, 2=EVEN, 3=NONE)	(EVEN)
COMMAND LINK	
PORT TYPE (1=RS232A, 2=RS232B, 3=RS422)	(3)
START TIMEOUT (0-255), 65535 = (OFF).	(65535)
ACK WAIT TIMEOUT (0-255), 65535 = (OFF).	(3)
MAX REJECTS (0-255), 65535 = (OFF).	(3)
RECEIVE FRAME TIMER (1-999), 65535 = (OFF).	(5)
SET START TIMER	(2)
SET ACK WAIT TIMER (1-999), 65535 = (OFF).	(5)
SERIAL COMMAND DIAGNOSTICS	
1 Normal Mode	
2 Display All	(ALL)
SET IMAGE SIZE	(512*512)
SET PARITY (1 ODD, 2 EVEN, 3 NONE)	(ODD)
IMAGE LINK	
SET LINE TIMER (1 - 59), 0 = (OFF)	(59)
SET COPIES (1 - 99)	(1)
SET WINDOW PARAMETERS	
SET WINDOW WIDTH (1-4096)	(256)
SET WINDOW LEVEL (0-4095)	(128)
SET CURVE SHAPE TO	(3)
SET NOR/REV	(NORMAL)

FOR CES COMMAND MODE USE THE NULLMODEM AND SET BAUD RATE TO 1200 BAUD.

6.5.4. Functional Description

The Kodak imager has one dispenser in which several film size magazines can be loaded by the user.

Keypad control

There is no manual keypad control possible.

6.5.5. Service Notes

This section provides information on solving problems that may be encountered when configuring and/or operating this installation.

There is no information available.

6.5.6. Tested Releases & Film Sizes

This section provides a history of all software releases relevant to this interface, together with points to watch out for when using a particular release.

Philips

EasyVision RAD

Release R4.X	: Released for installation.
<i>Matrices used</i>	: 4080 * 4984 14 * 17" 4080 * 3960 14 * 14" 4080 * 2936 11 * 14" (Clear base and blue base) Grey 8

Kodak

100 / 100KEIM

?	: Released for installation.
---	------------------------------

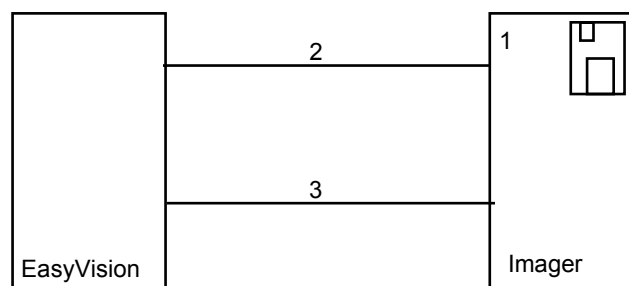
## 6.6. KODAK KELP 100XLP

### 6.6.1. Type of Connection

The connection possibilities are:  
SBUS / PCI, KCL protocol (RS422, E, 1200, 8, 1)

### 6.6.2. Ordering Information

For a SBUS / PCI (point to point) connection the following can be ordered:



Ordering information T.b.s.

Control cable (37P) connections required:

2:	TXD-
3:	RXD-
7:	Signal ground
20:	TXD+
21:	RXD+

### 6.6.3. Configuration

This section describes which parameters must be configured by the different parties. During the configuration both Philips and Kodak service engineers must be present.

#### 6.6.3.1. Philips

For the configuration procedure of the EasyVision RAD refer to the release document.

Configuration parameters per release:

SBUS / PCI

EasyVision RAD R4.X: Kodak KELP100XLP

**6.6.3.2. Kodak**

MEMORY REQUIRED	20 MBYTE (5 BOARDS)
DISPLAY ACTIVE MODALITY PARAMETERS	
DEVICE ID	[1]
DEVICE NAME	[PHILIPS]
PIXELS/LINE	[512]
LINES/IMAGE	[512]
SET CHANNEL CONFIGURATION TABLE	
1 CHANNEL 1	
DEVICE ID(0 - 2)	[1]
COMMAND PORT ID(1 - 3)	[3]
HOST PROTOCOL TYPE	
1 KCL 2 USP/SPCI 3 KEYPAD 4 P831-E	
5 TOSHIBA 6 M952 7 USP/FSPOT 8 USP/DASM	
CHOOSE ONE	[1]
DEFINE A SECONDARY HCL? (Y/N)	[N]
IMAGE DATA PORT ID(1)	[1]
INPUT PRIORITY(0 - 15)	[15]
CHANNEL ACTIVE(T OR F)	[T]
SET IMAGE DATA PARAMETERS	
LINE TIMER(0-59)	[59]
IMG PARITY(0-NONE,1-EVEN,2-ODD)	[2]
TRANSFER MODE(1-PARTIAL,2-WHOLE)	[1]
SYNC MODE(1-AUTOSYNC 2-NO SYNC)	[2]
SET COMMAND PORT CONFIGURATION TABLE	
CHANNEL 1	COMMAND PORT
3	
STOP BITS(1 OR 2)	[1]
PARITY(0-NONE,1-EVEN,2-ODD)	[1]
DATA LENGTH(7 OR 8)	[8]
BAUD RT(300,1200,2400,9600)	[1200]
DRIVER TYPE(232 OR 422)	[RS422]
RECEIVE FRAME TMR(0-999,OR 65535=OFF)	[5]
START TIMER(0-999,OR 65535=OFF)	[2]
ACK WAIT TIMER(0-999,OR 65535=OFF)	[2]
START TIMEOUT CTR(0-255,OR 65535=OFF)	[65535]
ACK WAIT COUNTER(0-255,OR 65535=OFF)	[3]
MAX REJECTS COUNTER(0-255,OR 65535=OFF)	[10]

**6.6.4. Functional Description**

The Kodak has one dispenser with the possibility to swap the film size as needed by the user. The imager is not able to report the media type (blue base or clear base) and size.

Keypad control

There is no manual keypad control possible.



### 6.6.5. Service Notes

This section provides information on solving problems that may be encountered when configuring and/or operating this installation.

#### Symptom

Film size selection not possible.

#### Cause

The Kodak KELP 100XLP has the possibility to select different film formats. If the settings Pixel per line and Lines per image are set out for the large format, it is not possible to select small formats.

#### Remedy

Select the minimum values, which are the settings for the smallest film size.

#### Symptom

No image printed (HCU error on EasyVision RAD).

#### Cause

The EasyVision RAD gives an HCU error with a KODAK KELP 100 XLP or 2180 or 1120. The problem occurs most likely during installation.

#### Remedy

The EasyVision RAD sends a complete matrix to the laser imager. In the test mode the control path is correct and the data path gives an error. switch OFF the COMMON TEXT (DISABLE) in the laser imager, ask the KODAK engineer to do this.

#### Symptom

Digital interface problems.

#### Cause

Kodak KELP 100 XLP gives problems with digital interfacing.

#### Remedy

At least software level 1.12 should be installed.

#### Symptom

100 XLP does not accept configuration settings.

#### Cause

The configuration settings are stored in NVRAM. Sometimes they cannot be configured.

#### Remedy

Ask Kodak to use the "Ctrl-Kill" command.

6.6.6. Tested Releases & Film Sizes

This section provides a history of all software releases relevant to this interface, together with points to watch out for when using a particular release.

Philips

EasyVision RAD

Release R4.X	: Released for installation.
<i>Matrices used</i>	: 4096 * 5120 14 * 17" 4096 * 4140 14 * 14" 4096 * 3192 11 * 14" (Clear base and blue base) Grey 8

Kodak

100 XLP

?	: Released for installation.
---	------------------------------

## 6.7. KODAK XLT 7720 / KEMCI

### 6.7.1. Type of Connection

The connection possibilities are:  
SCSI

### 6.7.2. Ordering Information

SCSI interface

#### NOTE

*SCSI fibre optic extender (up to 1 Km) Laser Link III Model AC1-2003 type B.*

*order at:*

*Applied Concepts Inc,  
9130 SW Poiner Court,  
Wilsonville OR 97070 USA  
Phone: +1-503-685-9300  
Fax: + 1-503-685-9099*

---

### 6.7.3. Configuration

This section describes which parameters must be configured by the different parties. During the configuration both Philips and Kodak service engineers must be present.

#### 6.7.3.1. Philips

For the configuration procedure of the EasyVision RAD refer to the release document.  
Configuration parameters per release:  
SCSI

EasyVision RAD R4.X: Kodak XLT7720

#### 6.7.3.2. Kodak

##### Settings:

SCSI interface address R4.X is 4. However, when an SUN Sparcstation 5 is used it is possible that this address is already used by the EasyStore CD-Recordable option. One of the free SCSI addresses can be selected, the EasyVision RAD software will during the boot sequence recognize the printer on that specific address.

### 6.7.4. Functional Description

The imager can report media size and media type (opaque or transparent).

6.7.5. Service Notes

This section provides information on solving problems that may be encountered when configuring and/or operating this installation.

Symptom

Printing not possible.

Cause

The imagers equipped with a modification that ensures constant image quality independent of the ambient temperature have this problem.

Remedy

Ask KODAK to remove the update.

Symptom

Unable to print.

Cause

The colour cartridge is not supported by EasyVision RAD.

Remedy

Use only black and white cartridges.

6.7.6. Tested Releases & Film Sizes

This section provides a history of all software releases relevant to this interface, together with points to watch out for when using a particular release.

Philips

EasyVision  
RAD

Release R4.X	: Released for installation.
<i>Matrices used</i>	: <i>2048 * 1536 8.5 * 11"</i> <i>2048 * 2048 11 * 11"</i> <i>(Opaque or clear base) Grey 8</i>

Kodak

XLT7720

Printer firmware	C-71.05 S-03.02 : Released for installation.
------------------	---



## 7. Connectivity KONICA Imagers

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## 7.1. INTRODUCTION

This section describes various aspects of the connection / interfacing of a Philips EasyVision RAD to Konica laser imagers. For the installation and configuration procedures refer to the corresponding service and release manuals. This document contains information for service engineers (Philips & Konica) to verify if the set-up is identical to that tested and released by the PMG.

## 7.2. KONICA LI 10/21

### 7.2.1. Type of Connection

The LI10 connection possibilities are:

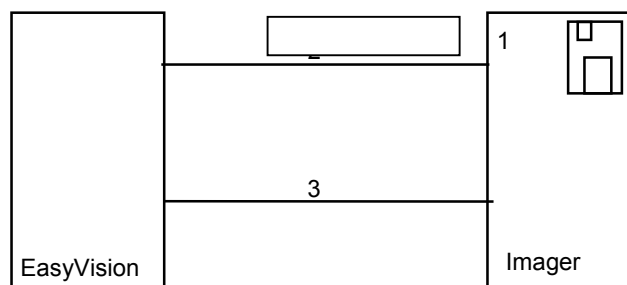
- Sbus, 952 ext protocol (RS422, E, 1200, 8, 1)

The LI21 connection possibilities are:

- Sbus, 952 ext protocol (RS422, E, 1200, 8, 1)

### 7.2.2. Ordering Information

For a Sbus (point to point) connection the following can be ordered:



Ordering information T.b.s.

### 7.2.3. Configuration

This section describes which parameters must be configured by the different parties. During the configuration both Philips and Konica service engineers must be present.

#### 7.2.3.1. Philips

For the configuration procedure of the EasyVision RAD refer to the release document.

Configuration parameters per release:

- Sbus  
EasyVision RAD R4.X: Konica LI10 / LI21.

### 7.2.3.2. Konica

1. 21 MByte input module is required
2. Host control : 3M 952, 1200, 8, 1, e.
3. Date : Odd

### 7.2.4. Functional Description

Film sizes selection is possible by host control from Konica software release xxx onwards.  
The imager is not able to report the media type (blue or clear base).

### 7.2.5. Service Notes

This section provides information on solving problems that may be encountered when configuring and/or operating this installation.

1. Symptom

Only four vertical bars are present on the film format 14 \* 17.

Cause

The problem is related to the firmware released for the imager.

Remedy

Upgrade the L21 to at least the FW version (at least 6.1007).

2. Symptom

EasyVision RAD printer test error: Line time-out error message.

Cause

The problem is related to the firmware released in the imager and is due to the fact that the line time-out as configured in the firmware is a little too short. The EasyVision RAD verifies in 4 minutes, but in some critical timing cases during the test 3.9 minutes is achieved. The printer test will generate a line time-out error message in extreme cases.

Remedy

None.

3. Symptom

No communication with printer.

Cause

Input buffer of the imager is too small.

Remedy

Increase input buffer.



### 7.2.6. Tested Releases & Film Sizes

This section provides a history of all software releases relevant to this interface, together with points to watch out for when using a particular release.

#### Philips

EasyVision RAD

Release R4.X : Released for installation.

*Matrices used* : 4096 \* 4856 14 \* 17"  
 4096 \* 3912 14 \* 14"  
 3024 \* 4096 11 \* 14"  
 2712 \* 3496 10 \* 12  
 2104 \* 2880 8 \* 10"  
 Grey 8

#### Konica

LI 10A

AS3207-509 Ver.7.0826 : Released for installation

LI 21

AS3207-509 Ver.7.0826 : Released for installation.

## 8. Connectivity PHILIPS Imagers / File print

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## 8.1. INTRODUCTION

This section describes various aspects of the connection / interfacing of a Philips EasyVision RAD to Philips laser imagers. For the installation and configuration procedures refer to the corresponding service and release manuals. This document contains information for service engineers (Philips) to verify if the set-up is identical to that tested and released by the PMG.

## 8.2. PHILIPS EVL 1000

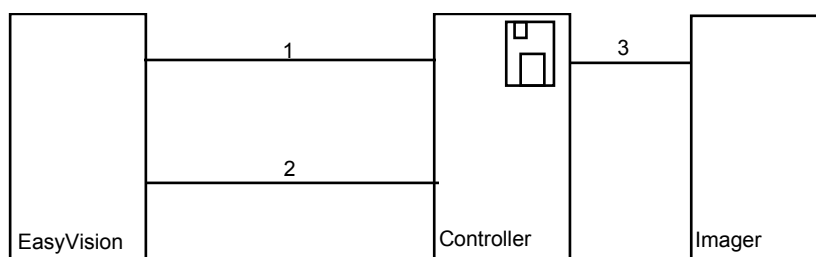
### 8.2.1. Type of Connection

The connection possibilities are:

- Sbus, AMDI-C protocol (RS422, E, 1200, 8, 1)

### 8.2.2. Ordering Information

For a Sbus (point to point) connection the following can be ordered:



The EVL1000 is factory configured. No connectivity parameters have to be set in the field.

1.	Data cable	15M	4535 500 21161
2.	Control cable	15M	4535 500 21201
3.	Control adapter cable		4535 500 21151
4.	Fibre optic cable	50M	4535 500 21191

The above-mentioned cables are delivered standard with the EVL1000. The following fibre cables can be ordered additionally.

4535 500 21171	15M
4535 500 21181	100M

### 8.2.3. Configuration

This section describes which parameters must be configured.

### 8.2.3.1. Philips

For the configuration procedure of the EasyVision RAD refer to the release document.

Configuration parameters per release:

- Sbus  
EasyVision RAD R4.X: Philips EVL1000

### 8.2.3.2. Philips EVL 1000

At the initial installation of the EVL1000, the controller and imager software is already installed.

#### Settings:

Control            Agfa AMDI-C, RS422, even, 1200, 8, 1

Image             RS422, Odd

### 8.2.4. Functional Description

The EVL1000 has one dispenser and can not be upgraded for the second dispenser as indicated in the PMS catalogue. The imager is able to report the media size but cannot report the media type (blue base or clear base).

#### Keypad control

There is no manual keypad control possible.

### 8.2.5. Service Notes

This section provides information on solving problems that may be encountered when configuring and/or operating this installation.

1. Symptom  
Batch processing not possible.

#### Cause

Second film of batch processing causes the controller to hang up / reset. Other prints e.g., single print and multi-copy work correctly for a long period of time.

#### Remedy

Please order part number 4535 500 34291 to solve this problem via a special upgrade. There is NO FCO released, because no problems have been experienced with the previous serial numbers.

### 8.2.6. Tested Releases & Film Sizes

This section provides a history of all software releases relevant to this interface, together with points to watch out for when using a particular release.

#### Philips

EasyVision RAD

Release R4.X	: Released for installation.
<i>Matrices used</i>	: 4256 * 5172 14 * 17"
	4256 * 4232 14 * 14"
	4256 * 3300 11 * 14"
	2368 * 2972 8 * 10"
	(Clear, Blue base and opaque) Grey 8

#### Philips

EVL 1000

Controller MG30402	: Released for installation
Imager LTP1204	: Released for installation

#### NOTE

*Update via FCO 00 466 002 to next release.*

---

Controller MeGa1P10	: Released for installation
Imager LTP1305	: Released for installation
Imager LTP1405	: Released for installation

## 8.3. PHILIPS TO FILE

### 8.3.1. Type of Connection

In order to access the files the PC or SUN should be connected to the network. Via a net browser (e.g. Netscape or Explorer) the files can be downloaded and viewed on the PC or SUN.

### 8.3.2. Ordering Information

N.A.

### 8.3.3. Configuration

This section describes which parameters must be configured.

For the configuration procedure of EasyVision RAD refer to the release document.  
Configuration parameters per release:

- File  
EasyVision RAD R4.X: Philips to File

To be able to view these images the "User permissions " must be set correctly. Go to the Customization panel:

**Customization** System time 18:15 [Adjust time...](#)


Destinations for remote functions	User permissions	Print protocols
<p><b>Acquisition system</b> </p> <p><b>Destination</b></p> <ul style="list-style-type: none"><li><b>Printer</b> </li><li><b>Medium</b> </li><li><b>Storage</b> </li><li><b>Export</b> </li></ul>	<p><b>Users</b></p> <ul style="list-style-type: none"><li>Saskia</li><li>Bert</li></ul> <p><a href="#">Login...</a></p>	

Select login.


Customization


System time 18:16 Adjust time...


Destinations for remote functions


Acquisition system 

Destination

Printer 

Medium 

Storage 

Export 

User permissions


Users

Saskia

Bert

Login

Print protocols

Application package  Bolus chase

Name	Comment
1-BCR-on-max-3-pages-L	PMS
1-BCR-on-max-4-pages-P	PMS
1-BCR-with-3x2-P-equi	PMS
1-BCR-with-3x2-P-special	PMS
1-BCR-with-3x3-L-equi	PMS

New...

Copy...

Edit...

Delete...

Login permission

Username

Password

Login

Logout

Cancel

Depending on the situation on site you are authorized to login. Most of the times only the hospital administrator has access rights. You may try the Username Masteruser with the password MasterUser. When you have the correct permissions you get the next panel.

User permissions	
<b>Add new user</b>	<b>Registered users</b>
<b>User name</b> <input type="text"/>	<b>Names:</b> <div>Saskia Bert</div>
<b>Password</b> <input type="password"/>	
<b>Password (again)</b> <input type="password"/>	
<b>Login required for:</b>	<b>Login required for:</b>
<input type="checkbox"/> User permissions	<input type="checkbox"/> User permissions
<input type="checkbox"/> Review	<input type="checkbox"/> Review
<input type="checkbox"/> WWW directory browser	<input type="checkbox"/> WWW directory browser
<input type="checkbox"/> NetView:	<input type="checkbox"/> NetView:
<input type="checkbox"/> whole database	<input type="checkbox"/> whole database
<input type="checkbox"/> review folders	<input type="checkbox"/> review folders
<b>Add</b>	<b>Edit...</b>
<b>Reset</b>	<b>Delete</b>
<b>Exit</b>	

Type in the New User name and the corresponding password. Define also the required login permissions. For file print browsing via a browser (e.g. Netscape or Explorer) at least the WWW directory browser must be enabled. See next figure.



User permissions	
<b>Add new user</b> <b>User name</b> <input type="text" value="Print"/> <b>Password</b> <input type="text"/> <b>Password (again)</b> <input type="text"/> <b>Login required for:</b> <input type="checkbox"/> User permissions <input type="checkbox"/> Review <input checked="" type="checkbox"/> WWW directory browser <input type="checkbox"/> NetView: <input type="checkbox"/> whole database <input type="checkbox"/> review folders  <input type="button" value="Add"/> <input type="button" value="Reset"/>	<b>Registered users</b> <b>Names:</b> <div><div>Saskia</div><div>Bert</div></div> <b>Login required for:</b> <input type="checkbox"/> User permissions <input type="checkbox"/> Review <input type="checkbox"/> WWW directory browser <input type="checkbox"/> NetView: <input type="checkbox"/> whole database <input type="checkbox"/> review folders  <input type="button" value="Edit..."/> <input type="button" value="Delete"/>
<input type="button" value="Exit"/>	

Click add to register the new user.

User permissions	
<b>Add new user</b> <b>User name</b> <input type="text"/> <b>Password</b> <input type="password"/> <b>Password (again)</b> <input type="password"/> <b>Login required for:</b> <input type="checkbox"/> User permissions <input type="checkbox"/> Review <input type="checkbox"/> WWW directory browser <input type="checkbox"/> NetView: <input type="checkbox"/> whole database <input type="checkbox"/> review folders <input type="button" value="Add"/> <input type="button" value="Reset"/>	<b>Registered users</b> <b>Names:</b> <div> Saskia  Bert  Print </div> <input type="button" value="Edit..."/> <input type="button" value="Delete"/> <b>Login required for:</b> <input type="checkbox"/> User permissions <input type="checkbox"/> Review <input checked="" type="checkbox"/> WWW directory browser <input type="checkbox"/> NetView: <input type="checkbox"/> whole database <input type="checkbox"/> review folders
<input type="button" value="Exit"/>	

Exit the "User permission" screen.

#### 8.3.4. Functional Description

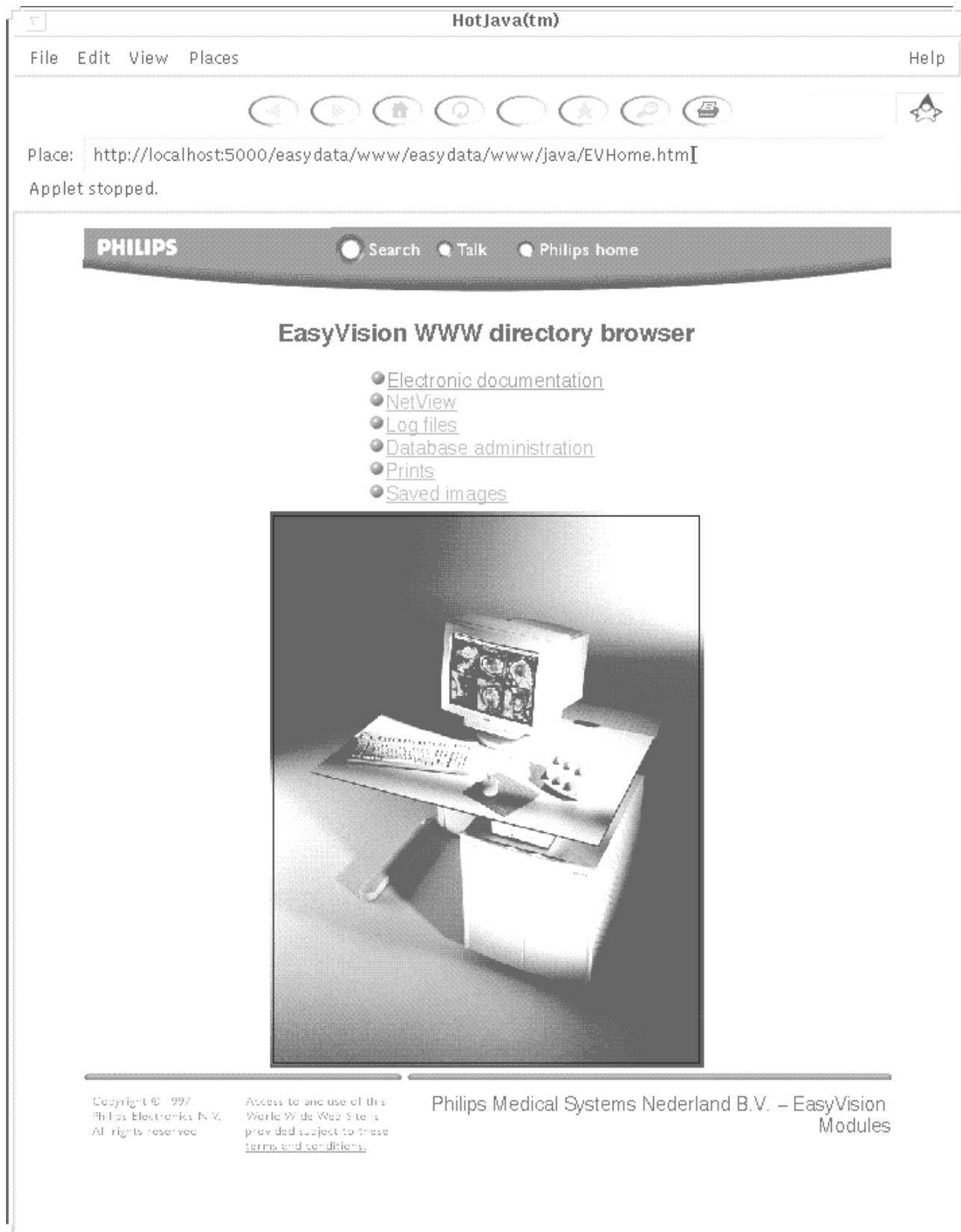
The EasyVision RAD is able to save images in TIFF or JPEG format. Different sizes (including screen) and color or grey can be configured.

These images can be accessed via a web browser (e.g. Netscape or Explorer). The access rights are defined in the Customization panel (see previous chapter).

Depending on the application the images are stored in a certain directory of the Server or Single user workstation. Jobs created with print to file are stored in the directory "File prints". Jobs, which are made with the CT or MR application packages, are stored in the directory "Saved images".

#### NOTE

*The localhost as mentioned in this screen grab  
 (http://localhost:5000/easydata/www/easydata/www/java/EVHome.htm)  
 should be the IP address of the EasyVision RAD.*



### 8.3.5. Service Notes

This section provides information on solving problems that may be encountered when configuring and/or operating this installation.

### 8.3.6. Tested Releases & Film Sizes

This section provides a history of all software releases relevant to this interface, together with points to watch out for when using a particular release.

#### Philips

##### EasyVision RAD

Release R4.X : Released for installation.

*Matrices used* : 2400 \* 2890 A4  
1440 \* 2400 A5  
1200 \* 1440 A6  
1184 \* 816 SCREEN  
Grey 8 or RGB-PI



## 9. Connectivity STERLING Imagers

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## 9.1. INTRODUCTION

This section describes various aspects of the connection / interfacing of a Philips EasyVision to Sterling (formerly DuPont and Polaroid) laser imagers. For the installation and configuration procedures refer to the corresponding service and release manuals. This document contains information for service engineers (Philips, & Sterling) to verify if the set-up is identical to that tested and released by the PMG.

## 9.2. Sterling Contact 400

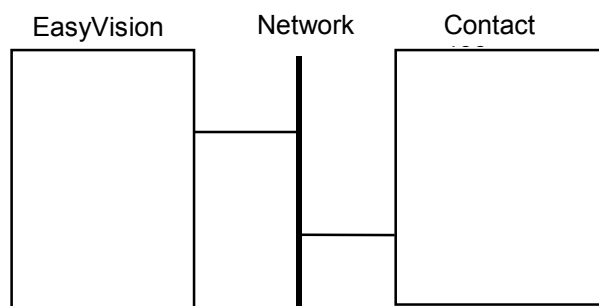
### 9.2.1. Type of Connection

The Sterling connection possibilities are:

- Ethernet, DICOM protocol

### 9.2.2. Ordering Information

#### 9.2.2.1. Ethernet



The network connection is always present at the modality side. No special items have to be ordered.

### 9.2.3. Configuration

#### 9.2.3.1. Philips

For the configuration procedure of the EasyVision refer to the release document.  
Configuration parameters per release:

- Ethernet DICOM  
EasyVision R4.X: Agfa Drystar 3000



### 9.2.3.2. Sterling

The system and configuration software of the Contact 400 is already loaded before delivery.

### 9.2.4. Functional Description

The STERLING imager has the possibility for one dispenser in which the user can mount one magazine. During installation STERLING defines the film size. The customer is not able to change the film size. The STERLING imager has one film size and EasyVision supports film type selection. However, since Sterling imagers do not report film type, images are only printed when the selected film type matches that available in the imager. If the types do not match, the image is accepted by the imager but stored on a hard disk in the imager.

#### Keypad control

There is no manual keypad control possible.

### 9.2.5. Service Notes

This section provides information on solving problems that may be encountered when configuring and/or operating this installation.

1. Symptom

No film is printed.

#### Cause

The maximum density, sent by DICOM is not within the calibrated range of the film (DICOM warning 0x0116).

#### Remedy

Make sure that the maximum density sent by EasyVision is 3.00 OD. STERLING should set this DMAX value on 3.20 OD.

2. Symptom

The print job goes into ERROR on the keypad of the imager. On the engine display, the error FOI\_EFI\_DU can appear (derived error) and the engine will reset.

#### Cause

Not enough RAM memory for the pixel matrix on the imager (ICM problem).

#### Remedy

None. The job will never be printed.

#### Cause

Not enough workspace for NIP (nve NIPxxx11)

#### Remedy

Set the workspace to 245760 on the imager and the job will be printed.

3. Symptom

DICOM communication fails. EasyVision print queue remains unchanged.

#### Cause

Insufficient disk quota on the imager side.

#### Remedy

Pause the printer on the EasyVision user interface until a number of films are printed.

4. Symptom

Print job on opaque remains in the queue of the Contact 400.

Cause

EasyVision sends a print job with dbmax defaulted at 3.00 on opaque film type.

Remedy

Upload the opaque dispenser until the DICOM job is sent. The default dbmax (3.50) will be used. The film will be printed after inserting the dispenser in the imager.

5. Symptom

Auto configure on the EasyVision does not work.

Cause

EasyVision uses the DICOM node system name as AE title for the auto-configuring.

Remedy

Enter the AE title in the DICOM node system name filed on the EasyVision and restart auto-configuring.

**9.2.6. Tested Releases & Film Sizes**

This section provides a history of all software releases relevant to this interface, together with points to watch out for when using a particular release.

**Philips**

EasyVision RAD

Release 4.X	: Released for installation.
<i>Matrices used DICOM</i>	: 4256 * 5172 14 * 17"
	4256 * 4232 14 * 14"
	4256 * 3300 11 * 14"
	(Blue base and clear base) Grey 8 and Grey 12

**STERLING**

Contact 400

DICOM:

MEGA3P32	: Released for installation.
----------	------------------------------

Connectivity Release:

MEGACON OEM33064	: Released for installation.
------------------	------------------------------

### 9.3. STERLING NS400 / LP400 (formerly DuPont)

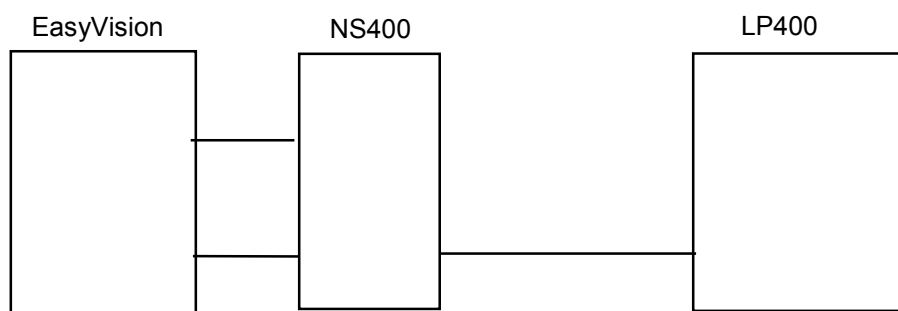
#### 9.3.1. Type of Connection

The connection possibilities are:

- Sbus/PCI, 952 ext. protocol (RS422, E, 1200, 8, 1)

#### 9.3.2. Ordering Information

For an Sbus/PCI (point to point) connection the following can be ordered:



Ordering information T.b.s.

#### 9.3.3. Configuration

This section describes which parameters must be configured by the different parties. During the configuration both Philips and Sterling service engineers must be present.

##### 9.3.3.1. Philips

For the configuration procedure of the EasyVision refer to the release document.

Configuration parameters per release:

- Sbus/PCI  
EasyVision R4.2: Sterling LP400

**9.3.3.2. Sterling****Configuration****CFG FILES**

pixels	=	4096
lines	=	5120
x aspect	=	32000
y aspect	=	32000
bits per pixel	=	8

pixel data type	=	0
image orientation	=	0
pixel resolution unit	=	0
x size stored	=	0
y size stored	=	0
packing mode	=	0
#		
shared buffer size	=	30720
shared buffer count	=	35
shared buffer minimum count	=	35
shared buffer prefetch count	=	0
#		
parity on	=	1
parity even	=	0
request timeout on	=	1
software timeout	=	90
image retry count	=	1
header abort delay	=	2
line abort delay	=	1
lut file name	=	inactive

**FUL FILES**

f copies	=	no
f filmlayout	=	yes
f format	=	no

All other entrees are set to yes.

**ALM FILES**

Alarm resents per event	=	1
X -Ignore Alarm	=	1-19
N -Any Command Alarm	=	10-19
G -Global Alarm	=	20-120

**HOST CONTROL CONFIGURATION**

Possible eom characters

3 = ETX

D = CR

A = LF

0 = None

protocol type	=	NCC P831
eom character 1	=	D
eom character 2	=	0
tty name	=	\$scan1
stty baud	=	1200
stty parity	=	3
stty stop bits	=	1
stty data bits	=	8
interface type	=	RS422

### 9.3.4. Functional Description

Three different film formats are supported by this imagers, of which only two may be present in the imager simultaneously. From Sterling software version 2.8 onwards film size selection is possible.

#### Keypad control

There is no manual keypad control possible.

### 9.3.5. Service Notes

This section provides information on solving problems that may be encountered when configuring and/or operating this installation.

#### 1. Symptom

The border is too wide on a 14 \* 17" film.

#### Cause

Incorrectly configured imager.

#### Remedy

Select SHORT HOSE in the keypad set-up menu of the NS400.

#### 2. Symptom

No images printed and no error indication on the EasyVision.

#### Cause

The NS400 internal faults are translated to error 19, which does not give an error message to the EasyVision, hence no indication is present for the user.

#### Remedy

Ask Sterling to configure the NS400 such that the internal messages are translated to error 71, which will give a "Printer Error" on the EasyVision and more detailed information on the imager keypad.

### 9.3.6. Tested Releases & Film Sizes

This section provides a history of all software releases relevant to this interface, together with points to watch out for when using a particular release.

#### **Philips**

##### EasyVision RAD

Release R4.X : Released for installation.

*Matrices used* : 4096 \* 4980 14 \* 17"  
4096 \* 3144 11 \* 14"  
3368 \* 4092 8 \* 10"  
Grey 8

#### **Sterling**

##### NS400

Release < 2.8 : Released for installation. No possibility of media size selection

Release 2.8 : Released for installation. With the possibility of media size selection

## 9.4. STERLING NS400 / LLI (formerly DuPont)

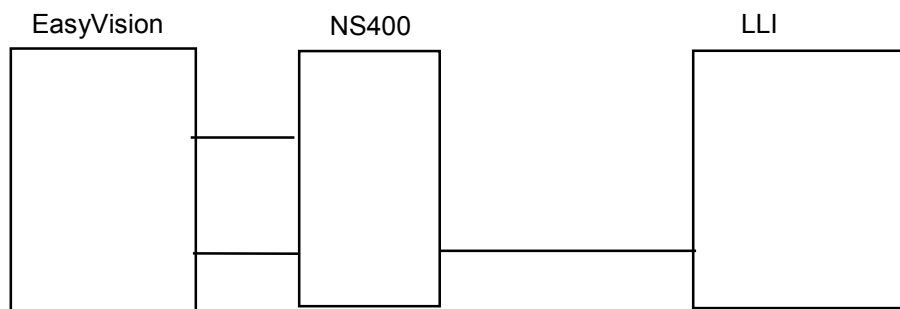
### 9.4.1. Type of Connection

The connection possibilities are:

- Sbus/PCI, P831 protocol (RS422, E, 1200, 8, 1)

### 9.4.2. Ordering Information

For a Sbus/PCI (point to point) connection the following can be ordered:



Ordering information T.b.s.

### 9.4.3. Configuration

This section describes which parameters must be configured by the different parties. During the configuration both Philips and Sterling service engineers must be present.

#### 9.4.3.1. Philips

For the configuration procedure of the EasyVision refer to the release document.  
Configuration parameters per release:

- Sbus/PCI  
EasyVision R4.X: Sterling LLI

#### 9.4.3.2. Sterling

TBS

### 9.4.4. Functional Description

The Sterling imager has one dispenser.

#### Keypad control

There is no manual keypad control possible.

### 9.4.5. Service Notes

This section provides information on solving problems that may be encountered when configuring and/or operating this installation.

#### 1. Symptom

Error messages from the imager (e.g., no film, supply magazine missing, etc) on the EasyVision.

#### Cause

During synchronous alarm handling, a problem occurred with the new software release 2.6.0 for the SID of the NS400 network.

#### Remedy

Sterling must edit the configuration file to disable the sending of synchronous alarms (change 10 up to 18 from A to X).

### 9.4.6. Tested Releases & Film Sizes

This section provides a history of all software releases relevant to this interface, together with points to watch out for when using a particular release.

#### Philips

EasyVision RAD

Release R4.X : Released for installation.

*Matrices used* : 3272 \* 4096 14 \* 17"  
Grey 8

#### Sterling

LLI

Release 2.5.0a : Released for installation.

Release 2.6.0 : Released for installation.

## 9.5. STERLING HELIOS 1417 (formerly Polaroid)

### 9.5.1. Type of Connection

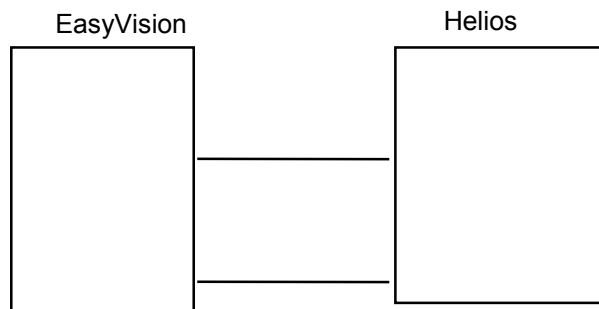
The connection possibilities are:

- Ethernet, HSTP protocol
- Sbus/PCI, 3M952 protocol

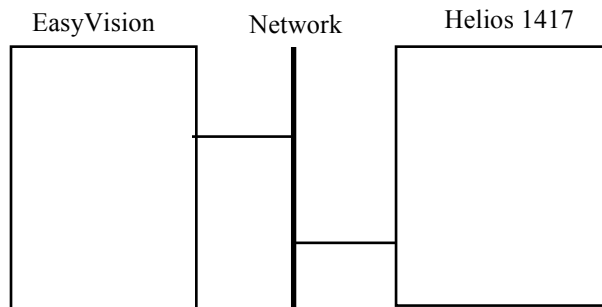
### 9.5.2. Ordering Information

### 9.5.2.1. Sbus/PCI

For a Sbus/PCI (point to point) connection the following can be ordered:



### 9.5.2.2. Network



The network connection is always present at the modality side. No special items have to be ordered.

## 9.5.3. Configuration

This section describes which parameters must be configured by the different parties. During configuration both Philips and Polaroid service engineers must be present.

### 9.5.3.1. Philips

For the configuration procedure of EasyVision refer to the release document.  
Configuration parameters per release:

- Sbus/PCI  
EasyVision R4.2 onwards: HeliosM952
- Network  
EasyVision R4.2: Polaroid Helios

### 9.5.3.2. Sterling

t.b.s.



#### 9.5.4. Functional Description

The Sterling Helios1417 imager may have two dispensers in which one film size can be loaded by the user. Film type (blue or clear base) is selectable by host control.

##### Keypad control

There is no manual keypad control possible.

#### 9.5.5. Service Notes

This section provides information on solving problems that may be encountered when configuring and/or operating this installation.

##### 1. Symptom

Images printed directly from the MR or CT do not have the same appearance as images printed via the EasyVision.

##### Cause

The MR and CT system do not have calibration possibilities and use the look up table in the printer. The images printed via EasyVision are calibrated to the target curve. The two input channels of the printer use the same look up table. Although the target curve for the EasyVision equals the look up table curve of the printer input, there will still be a difference in density between the two channels.

##### Remedy

Calibrate the EasyVision with the default values instead of the measured and enter the minimum and maximum density values in the EasyVision menu. The EasyVision is now calibrated linearly. Both channels will now have the same density values.

#### 9.5.6. Tested Releases & Film Sizes

This section provides a history of all software releases relevant to this interface, together with points to watch out for when using a particular release.

##### **Philips**

##### EasyVision RAD

Release R4.2L1 : Released for installation.

*Matrices used Sbus/PCI* : 3616 \* 4439 14 \* 17"  
Grey 8

*Matrices used Networks* : 4336 \* 5324 14 \* 17"  
(blue and clear base) Grey 8 and Grey 12

##### **Sterling**

##### NS400

Release 2.8 : Released for installation. With the possibility of media size selection

##### Sterling Helios 1417

Release V1.64 : Released for installation.

## 9.6. Sterling inkjet 400 (Sij400) SBus/PCI

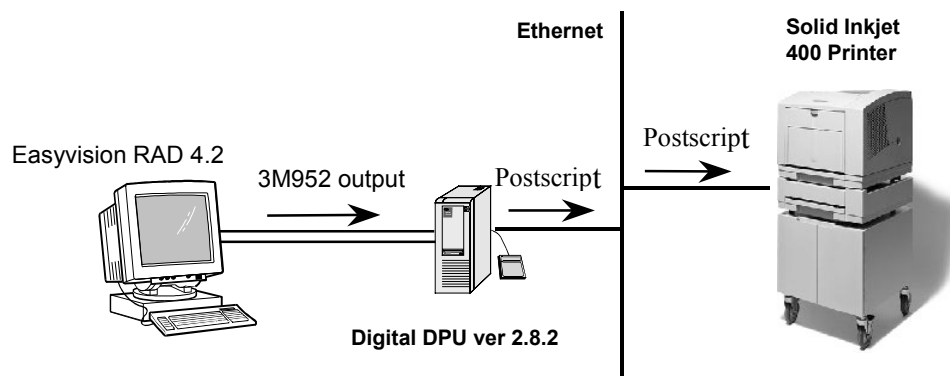
### 9.6.1. Type of Connection

The Sterling connection possibilities are:

- SBUS/PCI 3M952 protocol via Digital DPU
- Ethernet, DICOM protocol

### 9.6.2. Ordering Information

#### 9.6.2.1. SBus/PCI



### 9.6.3. Configuration

This section describes which parameters must be configured by the different parties. During configuration both Philips and Polaroid service engineers must be present.

#### 9.6.3.1. Philips

For the configuration procedure of EasyVision refer to the release document.  
Configuration parameters per release:

- Sbus/PCI  
EasyVision R4.2 onwards: Sterling SIJ400

### 9.6.3.2. Sterling

iilnx Digital DPU configuration (M952) for Philips Easyvision RAD 4.2 level 2 printing on sij400

**Linux software revision: 2.8.1 or 2.8.2**

**sij400 software: 7.72**

#### **Network configuration file** (IP addresses given as example)

```
REMOTE_HOST_RECORD:
.ip_address ..... = 12.168.2.10
 host_alias..... = dpu
 user_login ..... = anonymous password
REMOTE_HOST_RECORD:
 ip_address ..... = 192.168.2.20
 host_alias..... = sij400
 user_login ..... = anonymous password
#
```

Node configuration files:

Disks:

**-DPU fixed scsi disk with adjustable image partition**

Databases:

**-image server database**

**NCC**: (Network Control Channel)

**-Keypad interface**

**-Philips Easyvision host control interface (m952)**

```
*cfg file
#
# Possible eom_characters:
#   3 = ETX
#   D = CR
#   A = LF
#   0 = None
#
protocol_type           = NCC_M952
eom_character_1         = D
eom_character_2         = 0
tty_name                = $scan1
stty_baud               = 1200
stty_parity             = 3
stty_stop_bits          = 1
stty_data_bits          = 8
```

**\* Full feature file**

```

name                               = full
#####
# Feature File - 3M M952 (full feature)
# for Philips Easy Vision Workstation
#-----
# Entry codes:
#   yes = controlled by Keypad
#   no  = controlled by Host
#####
f_channel_key           = yes
f_study_name            = yes
f_patient_key           = yes
f_input_resource_key    = yes
f_priority              = yes
f_f_collate             = yes
f_ss_resource_info      = yes
f_f_image_text          = yes
f_border_color          = yes
f_border_sizes          = yes
f_border_layout         = yes
f_copies                = no
f_film_type_dp          = yes
f_film_size             = no
f_film_layout           = no
f_format                = no
f_overlay               = yes
f_menu_parameters       = yes
f_dmin                  = yes
f_dmax                  = yes
f_brightness            = yes
f_contrast              = yes
f_density               = yes
f_polarity              = yes
f_lut_select            = yes
f_trim_line_type        = yes
f_f_rotation            = no
f_filter_type_dp        = yes
f_lut_filename          = yes

```

**\* Short feature file**

```

name                               = short
#####
# Feature File - 3M M952 (short feature)
# for Philips Easy Vision Workstation
#-----
# Entry codes:
#   yes = controlled by Keypad
#   no  = controlled by Host
#####
f_channel_key           = yes
f_study_name            = yes
f_patient_key           = yes
f_input_resource_key    = yes
f_priority              = yes
f_f_collate             = yes
f_ss_resource_info      = yes
f_f_image_text          = yes
f_border_color          = yes
f_border_sizes          = yes
f_border_layout         = yes
f_copies                = yes
f_film_type_dp          = yes
f_film_size             = yes
f_film_layout           = yes
f_format                = no
f_overlay               = yes
f_menu_parameters       = yes
f_dmin                  = yes
f_dmax                  = yes
f_brightness            = yes
f_contrast              = yes
f_density               = yes
f_polarity              = yes
f_lut_select            = yes
f_trim_line_type        = yes
f_f_rotation            = yes
f_filter_type_dp        = yes
f_lut_filename          = yes

```

**\* Alarm file:**

```
#####
#       Alarm control file for 3M M952 Host-Control       #
#       via the Philips Easy View Workstation             #
#####
#
# The alarm_resends_per_event indicates how many times an alarm
# will be resent to the Host before the 'alarm event' is
# considered complete. The possible values are:
#       0 : do not resend (i.e. only send the alarm once)
#       >0 : resend this number of times
#       -1 : resend until actual alarm is detached
#
alarm_resends_per_event          = 10
#
# The alarm_event_count indicates how many 'alarm events' will
# be generated for a given alarm. If more than one alarm event
# is specified, there will be a sleep time between events when
# the alarm will not be sent at all. The possible values are:
#       0 : no alarm events (i.e. alarms will never be sent)
#       >0 : this many alarm events will occur
#Y5      -1 : continue alarm events until alarm is detached
#
alarm_event_count                = 1
□
# The alarm_sleep_time indicates the number of seconds to 'sleep'
# between 'alarm events'. During this sleep time, the alarm will
# not be sent to the Host.
#
alarm_sleep_time                 = 180
#
# The global_alarm is sent to the Host to indicate that a
# more descriptive alarm message is present at the keypad
# (i.e. none of the alarm codes below adequately describes
# the error to the Host, and so the user should consult the
# LINX keypad for more information).
#
global_alarm                     = 71
#
#####
# LINX Control Codes:
# -----
#   P - Print alarm          (send in response to 'print' command)
#   N - Any-command alarm    (send in response to any command,
#                             including 'print')
#   A - Asynchronous alarm   (send at any time; not necessarily in
#                             response to a command)
#   G - Send global alarm    (send the global alarm, as indicated)
#   X - Ignore alarm         (don't ever send the alarm to the host)
#
#
#                               M952      LINX
#                               Error      Control
# # Alarm Description          Code      Code
# -----
Ready                          1         = X
Acquiring an Image             2         = X
Opening the Magazines          3         = X
Removing Film                  4         = X
Moving Film to Exposure Area   5         = X
Exposing Film                  6         = X
Closing Magazines              7         = X
Moving Film to Processor       8         = X
Not Assigned                   9         = X
Supply Magazine Empty Detected 10        = N
Receive Magazine Full Detected 11        = N
Supply Magazine not Detected   12        = N
Receive Magazine not Detected  13        = N
Supply Drawer Open Detected    14        = N
Receive Drawer Open Detected   15        = N
Top Cover Open Detected        16        = N
Film Processor Not Ready Detected 17      = N
Docking Unit Not Ready Detected 18      = N
Not Assigned                   19        = N
Film near Supply Magazine      20        = G
```

Film near Supply Magazine	21	= G
Film in Center Machine	22	= G
Film in Center Machine	23	= G
Double Film Feed	24	= G
Film in Docking Unit	25	= G
Film in Docking Unit	26	= G
Film in Processor	27	= G
Film near Receive Magazine	28	= G
Receive Magazine did not open	29	= G
Supply Magazine did not close	30	= G
Supply Magazine did not open	31	= G
Setup Fail - No more definable zones	32	= G
Setup Fail - Aspect Ratio Error	33	= G
Setup Fail - current user can not DZO	34	= G
Setup Fail - images can not fit in zones	35	= G
Setup Fail - Insufficient Memory	36	= G
Setup Fail - Can not set partitions	37	= G
No Pass/Fail from IMS	38	= G
Setup Fail - Missing or bad Pixel Clock	39	= G
Push Lever Stop Sensor overtime	40	= G
Film Leading Edge Detector fail	41	= G
Film Trailing Edge Detector fail	42	= G
Beam Splitter Position fail	43	= G
Drum Motor not stabilized	44	= G
Polygon Motor not stabilized	45	= G
SOS not detected	46	= G
Data Ready from IMS not detected	47	= G
EOF from IMS not detected	48	= G
No response from IMS	49	= G
MCS received NAK over 3 times from IMS	50	= G
MCS transmitted NAK over 3 times to IMS	51	= G
IMS response not valid	52	= G
MCS Command not valid	53	= G
Setup Fail - Analog Intf not detected	54	= G
Setup Fail - SCP rcvd w/ images in mem	55	= G
Not Assigned	56	= G
Setup Fail IFT - invalid format	57	= G
Image Fail BMAG - bad magnification	58	= G
Image Fail BSET - bad setup for IMS	59	= G
Not Assigned	60	= G
Image Fail BCLR - bad clear (no image)	61	= G
Image Fail BVAL - bad value	62	= G
Image Fail BIM - bad image number	63	= G
Image Fail CDIG - bad cmd packet on intf	64	= G
Not Assigned	65	= G
Image Fail DIG - digital retries failed	66	= G
Image Fail DDIG - bad acquire data	67	= G
Image Fail TIME - acquisition timeout	68	= G
Not ready to print GEN - generic fail	69	= G
Not used	70	= G
Not ready to print BSET - bad setup	71	= N
IMS rejected cmd over 3 times	72	= G
IMS Status MRR - memory error	73	= G
IMS Status TERR - internal timing error	74	= G
IMS Status GEN - generic failure	75	= G
IMS did not rcv video params from MCS	76	= G
MCS transmitted NAK over 3 times to host	77	= G
MCS received NAK over 3 times from host	78	= G
Film Start Cam High Switch overtime	79	= G
Film Start Cam Middle Switch overtime	80	= G
Film Start Cam Low Switch overtime	81	= G
Rocker Cam Start Switch overtime	82	= G
Rocker Cam Stop Switch overtime	83	= G
Push Lever Home Switch overtime	84	= G
Y e Fail OVER - memory full	85	= G
IMS Image Directory is full	86	= G
IMS no EOT at end of Acquire	87	= G
No Vertical Sync detected by IMS	88	= G
IMS Vertical Sync problem	89	= G
IMS Vertical Sync problem	90	= G
IMS no EOF at end of Acquire	91	= G
MMU not detecting CTS from MCS	92	= G
MMU - bad or no responded from MCS	93	= G
MMU - bad or no responded from MCS	94	= G
MMU - bad or no responded from MCS	95	= G

MCS NOVRAM has a bad value	96	= G
Memory Controller timeout on Analog Aqu	97	= G
MCS rcvd cmd from undefined user	98	= G
Lockout user timeout in 30 seconds	99	= G
CPU Failure on PWA-B	101	= G
ROM Checksum Failure on PWA-B	102	= G
RAM Failure on PWA-B	103	= G
Timing Failure on PWA-B	104	= G
IMS System Controller PWA Failure	111	= G
IMS Memory Controller PWA Failure	112	= G
IMS Output Formatter PWA Failure	113	= G
IMS Mass Memory Failure	114	= G
IMS Analog Interface PWA Failure	115	= G
Password error access code	120	= G

**IDC:** (Image Data Channel)

- PSappsocket output: Solid ink jet 400
- Digital input Philips Easyvision

```
#-----#
# Configuration file for Philips EZV digital input #
#-----#
pixels = 3944
lines = 4792
x aspect = 32000
y aspect = 32000
bits per pixel = 8
pixel data type = 0
image orientation = 0
pixel resolution unit = 0
packing mode = 0
#
shared buffer size = 30720
shared buffer count = 35
shared buffer minimum count = 35
shared buffer prefetch count = 0
#
parity on = 1
parity even = 0
request timeout = 0
software timeout = 90
image retry count = 0
header abort delay = 2
line abort delay = 6
lut filename = inactive
```

**ICC:** (Imager Control Channel)

- Solid inkjet 400 printer

**Drivers :**

- TCP/IP secondary network interface driver

```
# Server Mode Configuration: The remainder of the items in
# this file relate to server mode installation.
#
# TCP/IP Ethernet interface parameters:
#
Ethernet interface type (0:none) (1:SMC 80x3) (2:3com 3c507)= 1
local host IP address for Ethernet = 192.168.2.10
IP netmask for Ethernet = 255.255.255.0
#
# TCP/IP Token ring interface parameters:
#
Enable IP over Token Ring (0:no) (1:yes) = 0
```



**Linx Keypad setup****Film printing: (user 1)**

User mode >	Host control	> <b>Full</b>
Image input>		> <b>Digital 1</b>
Output edit		> <b>sij400</b>
Film>	Size	>controlled by host
	type	> <b>blue</b>
	Layout	>controlled by host
Custom lookup table		> <b>Philips</b>
Camera lookup table		>not selectable (because custom lut selected)
contrast		>not selectable (because custom lut selected)
Dmax		> <b>300</b>
Dmin		> <b>0</b>
Interpolation		> <b>bilinear</b>
image polarity		> <b>positive</b>
Border>	size	<b>minimum</b>
	color	<b>black</b>
	text	> <b>off</b>

**Paper printing: (user 2)**

User mode >	Host control	> <b>short</b>
Image input>		> <b>Digital 1</b>
Output edit		> <b>sij400</b>
Film>	Size	> <b>A4</b>
	type	> <b>Paper</b>
	Layout	> <b>Portrait</b>
Custom lookup table		> <b>Philips</b>
Camera lookup table		>not selectable (because custom lut selected)
contrast		>not selectable (because custom lut selected)
Dmax		> <b>300</b>
Dmin		> <b>0</b>
Interpolation		> <b>bilinear</b>
image polarity		> <b>positive</b>
Border>	size	> <b>minimum</b>
	color	> <b>black</b>
text		> <b>off</b>

**NOTE**

If the customer wants to print on paper, the user paper prints must be selected (see section **Paper printing: (user 2)**) and the size 8x12 has to be selected on the Easyvision for size A4 printing. (for Letter size printing the size 8x11 must be selected)

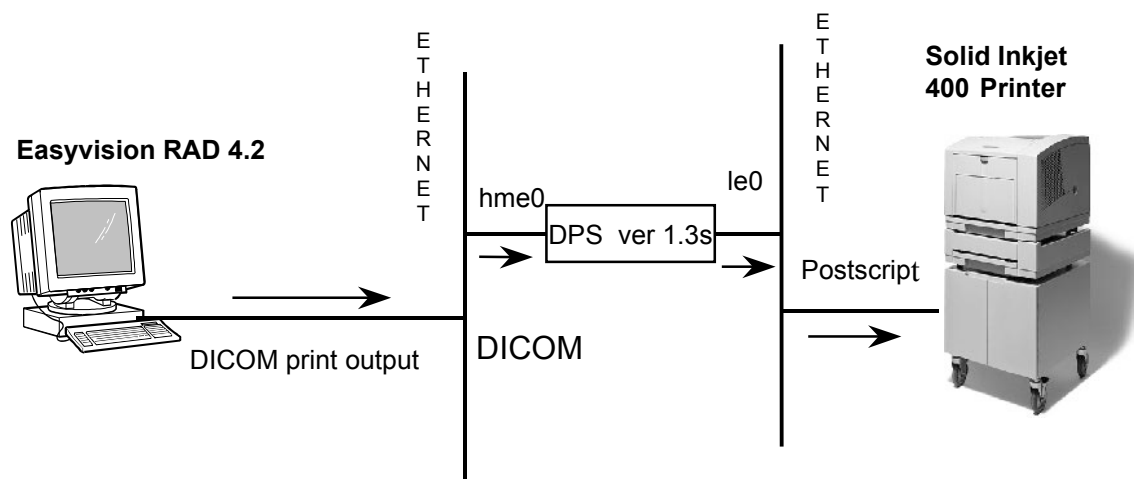
**9.7. Sterling inkjet 400 (Sij400) - DICOM – Ethernet****9.7.1. Type of Connection**

The Sterling connection possibilities are:

- Ethernet, DICOM protocol

### 9.7.2. Ordering Information

For a DICOM connection the following can be ordered



### 9.7.3. Configuration

#### 9.7.3.1. Philips

For the configuration procedure of the EasyVision refer to the release document.  
Configuration parameters per release:

- Ethernet DICOM  
EasyVision R4.X: **Sterling SIJ400 DICOM**

#### 9.7.3.2. Sterling, DICOM – Ethernet

**Network configuration file** (IP addresses given as example)

**/etc/hosts file**

```
127.0.0.0          localhost
130.143.177.6      HPS400P          loghost
130.143.180.9      evrad
#
192.168.2.2        HPS400P-le0
192.168.2.20       sij400
```

**Channels and printer configuration:**

**Channels:**

called AE	Calling AE	Printer	Preference	[Policy]
<b>sij400</b>		<b>sij400</b>	<b>122</b>	<b>[minimal]</b>
Printer	type	address		
<b>sij400</b>	<b>sij400</b>	<b>192.168.2.20</b>		

**Preferences:**

The preference choice is controlled by the Easyvision. A special custom curve for easyvision has to be entered in the DPS. This preference must be called **038** because the easyvision is configured to ask for this preference. If, for any reason, the preference 038 was not entered in the DPS, then the DPS would use the preference **122** which has been selected as default in the DPS sij400 channel (see section 2). This preference 122 is the LUT **soc variable** contrast **11** which is a good alternative for the Easyvision.

**Dicom Policy :**

The minimal Dicom policy must be set as below in the DPS :

```
density= warning
film-size-ID= unrestricted
media-type= unrestricted
interpolation=silent           (to avoid problem in case EV does not send magnification info)
bilinear-substitute=
true-size=error
aspect-ratio=silent
priority=silent
mem-allocation=silent
```

**Reminder of the Philips Dicom host configuration**

Image format	<b>STANDARD\1,1</b>
film orientation:	<b>portrait</b>
film destination:	<b>processor</b>
trim:	<b>no</b>
configuration	<b>CS038</b>
magnification:	<b>NONE</b>
max density:	<b>300</b>

**9.7.4. Service Notes**

This section provides information on solving problems that may be encountered when configuring and/or operating this installation.

1. Symptom  
configured as a DICOM printer the SIJ400 will be operated with a DICOM print server (Sun Sparc4). If this DICOM print server has been switched off this will be clearly indicated on the EasyVision. If just the printer has been switched off the images will be intermediately stored on the DICOM print server until the printer becomes operational again.

CauseRemedy

.

10. Connectivity Postscript Imagers

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## 10.1. INTRODUCTION

This section describes various aspects of the connection / interfacing of a Philips EasyVision RAD to printers connected to the parallel port and file printing. For the installation and configuration procedures refer to the corresponding service and release manuals. This document contains information for service engineers (Philips) to verify if the set-up is identical to that tested and released by the PMG.

## 10.2. Postscript printing

### 10.2.1. Type of Connection

The postscript printer is connected to the parallel port of the EasyVision RAD. The maximum cable length is 3 meters.

### 10.2.2. Ordering Information

N.A.

### 10.2.3. Configuration

This section describes which parameters must be configured.

For the configuration procedure of EasyVision RAD refer to the release document.  
Configuration parameters per release:

- File  
EasyVision RAD R4.X.: Paper print A4 or Letter

### 10.2.4. Functional Description

The EasyVision RAD is able to print images in TIFF or Jpeg format. Different sizes (including screen) and color or grey can be configured.

### 10.2.5. Service Notes

This section provides information on solving problems that may be encountered when configuring and/or operating this installation.

#### 1. Symptom

The LaserJet 4 sometimes outputs only white sheets of paper, one after the other, and stops only after the EVRad has been rebooted and the printer has been switched off/on.

#### Cause

The system controls the HP laserjet printer with Unix print commands. If a laserjet printer has been switched off the Unix system doesn't detect this status with the command lpstat.

#### Remedy

None.

#### 2. Symptom

A HP Laserjet prints numerous almost blanc pages.

#### Cause

The printer must have been switched OFF and ON while receiving image data.

#### Remedy

None. Breaks such as switching power OFF/ON or disconnecting the data line while image data are being transmitted cannot be recovered by the Centronics interface using PCL protocol or postscript protocol.

**10.2.6. Tested Releases & Film Sizes**

This section provides a history of all software releases relevant to this interface, together with points to watch out for when using a particular release.

**Philips**

EasyVision RAD

Release R4.X. : Released for installation.

*Matrices used* : 2400 \* 2890 A4  
24000 \* 2890 Letter  
Grey 8 or RGB\_PI



11. Connectivity SONY Imagers

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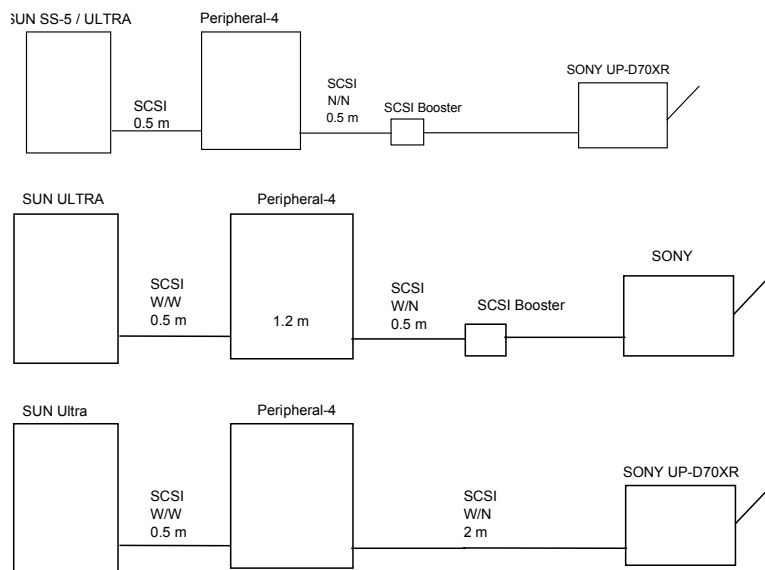
## 11.1. SONY UP-D70XR

### 11.2. Introduction

The Sony UP-D70XR digital color printer reproduces computer images on A4-size and Letter-size transparent film and print paper.

### 11.3. Configuration

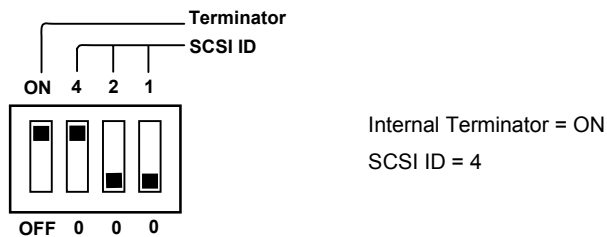
Physical configurations



#### 11.3.1. Configuration parameters

General		Remarks
Model	SONY UP-D70XR	
printer software	version 1.00D	display on power ON
Type of connection	EasyVision RAD – SONY UP-D70XR: SCSI	parallel
SCSI cable (2m) or	Ultra 5/10/60: VHDCI (68) ↔ Mini 50 SCSI-2 :SONY printer	SCSI cable shielded
SCSI Booster	For SCSI booster parts and cables to order refer to section EasyVision RAD 4.X connectivity chapter: SCSI connection.	
image memory	30MB	standard
SCSI Device type	<2>	default <3>
SCSI-ID	4 (refer to figure: DIP switch settings)	Dip switches rear
Internal terminator	ON	Dip switch rear
<b>Philips</b>		
EasyVision RAD	EasyVision RAD rel. 4.2 L2	
select interf. type	SCSI	
select Printer type	SONY UP-D70XR	
enter Printer name	Sony	

### 11.3.1.1. Setting the DIP Switch



The DIP switches in the figure above display the Philips EasyVision RAD settings

### 11.3.1.2. Setting the Device Type

The SONY UP-D70XR SCSI printer has to be set to

**SCSI Device Type < 2 >**

(refer to the manual 'Instructions For Use', chapter 'Setting the SCSI Device Type')

### 11.3.1.3. Adjusting the Print Quality parameters

On the Sony printer the following parameters have to be set :

- Color Adjust:
  - Red 0
  - Green 0
  - Blue 0
- Dark 0
- **Light -32**
- Sharpness 1 <Low>
- Gamma 0
- Lumination 1 Glossy
- Gray Adjust No = 0
- Gamma Adjust <CG> Photo
- Margin Print Margin <ON> 00

(refer to the SONY UP-D70XR instruction manual)

### 11.3.2. Service Notes

This section provides information on solving problems that may be encountered when configuring and/or operating this installation.

### 11.3.3. Tested Releases & Film Sizes

This section provides a history of all software releases relevant to this interface, together with points to watch out for when using a particular release.

<b>Philips</b>		
EasyVision RAD	Release 4.2V2L2 <i>Matrices used</i>	: Released for installation.

<b>Sony</b>		
UP- D70XR	ver. 1.00 D	Released for installation. <b>Note:</b> on paper referring quality only; not for diagnosis; on film has to be thoroughly tested